A GROWER'S GUIDE TO

MARKETING FRUITS, VEGETABLES, AND HERBS

IN ILLINOIS

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Contents

Introduction

During the 1980s, low commodity prices significantly reduced the profitability of conventional farming in Illinois, and interest in diversifying farm production through specialty crops has increased among grain farmers, livestock producers, and landowners.

Two major obstacles to successful ventures in alternative crops are finding markets and establishing price. Stories abound in which a producer, attracted by tales of profitability in specialty crop production, carefully researches the details of growing the crop but does not thoroughly analyze such marketing opportunities as where, to whom, and at what price the crop will be sold.

This directory will help new and potential growers (a) identify opportunities for specialty crops and (b) find access to the marketplace. It is designed to help you make initial contact with buyers of fresh fruits and vegetables and vegetable processors, and to acquaint you with the pricing, packaging, and quality standards for marketing specialty crops. It is only the beginning. Much of your education will occur "on the job."

Opportunities appear to exist for increased production of specialty crops in Illinois. Before the construction of our modern national highway system, fresh-market fruits and vegetables were routinely produced on a regional basis by the many truck farms that surrounded cities. Today, as energy and transportation costs rise, locally grown produce may again compete successfully with produce shipped from the southern and far western United States. In addition, consumers have become more interested in fresh, high-quality spring, summer, and fall fruits and vegetables produced by local growers.

Despite these favorable signs, it is not the intent of this directory to encourage everyone to grow specialty crops. If you are unwilling to make major commitments of time and investment capital, you should not attempt such an enterprise. Day-to-day

management decisions regarding cultural operations are critical, and too often small plantings are neglected for other work that may be the primary source of farm income.

Many sources of information are available from the Cooperative Extension Service on the production of fruit and vegetable crops in the Midwest. If you have no experience growing specialty crops, we urge you to consult the Cooperative Extension Service office in your county.

Fruit and vegetable marketing

The marketing process begins long before produce leaves the farm gate. Initial planting decisions should be based on information obtained from various marketing services, sales outlets, grower organizations, and the Cooperative Extension Service. Among the many factors that will influence your profitability are the potential volume of production, the availability of adequate financing, and your experience as a grower. Which crops you grow will also depend on the length of the growing season, the availability of labor, and the proximity of your site to established markets. Even the selection of varieties and the determination of planting schedules are basic marketing decisions.

Growers can often choose from several sales outlets, and you must decide which outlet or combination of outlets would be most profitable for your situation.

Grades and standards for specialty crops

Part I gives the federal grades for various specialty crops and describes quality characteristics that have commercial relevance at the South Water Market in Chicago.

Produce sold in interstate commerce is graded by federal standards. Produce traded within a state, while always assigned a grade by the grower, is seldom graded by an official U.S. inspector. Only when the grower and buyer disagree about the grower's assigned grades is an official U.S. inspector called in.

Grading standards are divided into two classes: quality grades and condition grades. Quality grading, the traditional method, bases grade on color, firmness, shape, and so forth. Condition grading takes quality grading one step further, specifying that a certain percentage of the total lot must meet the grade requirement. For example, a bulk bin of twenty watermelons that contains nineteen watermelons qualifying for U.S. No. 1 and

one badly sunburned watermelon not qualifying for No. 1 can still be classified No. 1, because condition requirements state that only 95 percent of a lot must meet No. 1 requirements.

You can obtain federal quality and condition requirements for all fruits and vegetables, free of charge, from the U.S. Department of Agriculture, AMS; Fresh Products Branch, F&VD; 2052 South Building; Washington, DC 20250.

Seasonal price variation

Part I also includes charts that show monthly price ranges during the marketing season for each crop over the past five years. These charts indicate the past variability in price for each crop and the range of price likely to be received at terminal produce markets. The price received for a crop will depend on seasonal supply and demand conditions, which are likely to change from year to year. These changes mostly depend on the growing conditions in alternate producing regions and the availability of transportation between producing regions and terminal markets.

Primary Illinois markets for fruits and vegetables

Illinois growers may choose among one or more sales outlets for their fresh produce:

- direct markets,
- retailers, such as chain stores,
- terminal produce markets, and
- processors

The suitability of the different sales outlets varies considerably, depending on the location of the farm, the volume produced, the crops grown, and the marketing ability of the grower. Generally, smaller quantities of an assortment of vegetables are most profitably sold in local markets through direct marketing. Wholesale buyers and processors usually require larger quantities of vegetables.

Direct markets

Selling directly to the consumer has recently become much more common in Illinois. Examples of direct-market outlets are pick-your-own operations, roadside stands, and farmers' markets. Pick-your-own is a popular method of selling strawberries, other berries and fruits, and selected vegetables. In a variant of the pick-your-own operation, vegetables such as sweet corn, melons, and pumpkins are harvested by the farm

crew and brought to a central location on the farm where customers may select their own produce.

Roadside stands are another popular way to sell fruits and vegetables. Some growers develop a reputation for specific crops, such as apples, cider, sweet corn, pumpkins, tomatoes, and fruit baskets. Usually grower-operated roadside stands are open only during the growing season or for a short period after harvest. A good location on a busily traveled road is probably the single most important factor in a successful roadside operation.

Many cities in Illinois now have farmers' markets that are open one or two days a week. Because of perishability, it is particularly important for producers to have more than one opportunity during the week to sell fresh produce. The market should also be within reasonable driving distance from the farm, to maintain the product's freshness and reduce transportation costs. For the location of current farmers' markets in Illinois, refer to the Directory of Illinois Fresh Fruit and Vegetable Markets, available from the Illinois Department of Agriculture.

Retailers

Retailers provide an excellent outlet for growers who are fortunate enough to have either wholesale farmers' markets or small chain stores located nearby (within 25 to 30 miles). These outlets sometimes cater to smaller growers, and the advantages to producers are usually cash sales and repeat business. Most large grocery chains, however, prefer a dependable supply of a uniform product, usually shipped over a long season from growing points in California, Florida, Texas, or elsewhere. Nevertheless, some chain stores are now emphasizing Illinois produce and the advantages of locally grown, high-quality fruits and vegetables. Generally, it is the larger growers and cooperative marketing groups that can best take advantage of selling directly to large chain stores. Their size allows them to guarantee uniformly packaged, high-quality produce; provide precooling and icing; and ship on schedule to large distribution centers or warehouses. Individual chain stores may also have their own requirements for harvest condition, grade, and packaging for each type of produce.

Terminal produce markets

Several large terminal markets are located near Illinois growing regions. In St. Louis, the terminal market is called Produce Row; in Chicago, the South Water Market; and in Benton Harbor, Michigan, the Benton Harbor Fruit Market. Shippers, truckers, and large-scale growers may deal directly with one of many commission houses, which often specialize in a limited number of fruits or vegetables. They usually deal in carlots or trucklots and then sell in smaller quantities to produce buyers from chain stores, grocery stores, hotels, restaurants, produce markets, and peddlers. Some commission houses sell to "jobbers," who specialize in certain kinds of produce for their clientele.

Many commission houses sell produce "on consignment." Instead of purchasing a grower's produce "outright," a commission house typically sells, but does not take ownership of, a grower's produce at some charge or commission specified in advance. Growers interested in selling through commission houses should contact houses months in advance of intended delivery to arrange and specify marketing plans. However, during periods of shortage, commission houses may agree to handle produce on short notice. It is important to deal with a reputable commission house to ensure the sale of produce at a good price. Part II of this directory lists commission buyers at the South Water Market in Chicago, at Produce Row in St. Louis, and at other Illinois locations, along with the types of produce they handle.

Vegetables packed for wholesale sales to chain stores, shippers, or terminal produce markets must be packaged, graded, and labeled according to the requirements of the buyer. Appendix A gives descriptions of the most common packaging requirements for fruits and vegetables at terminal markets.

Processors

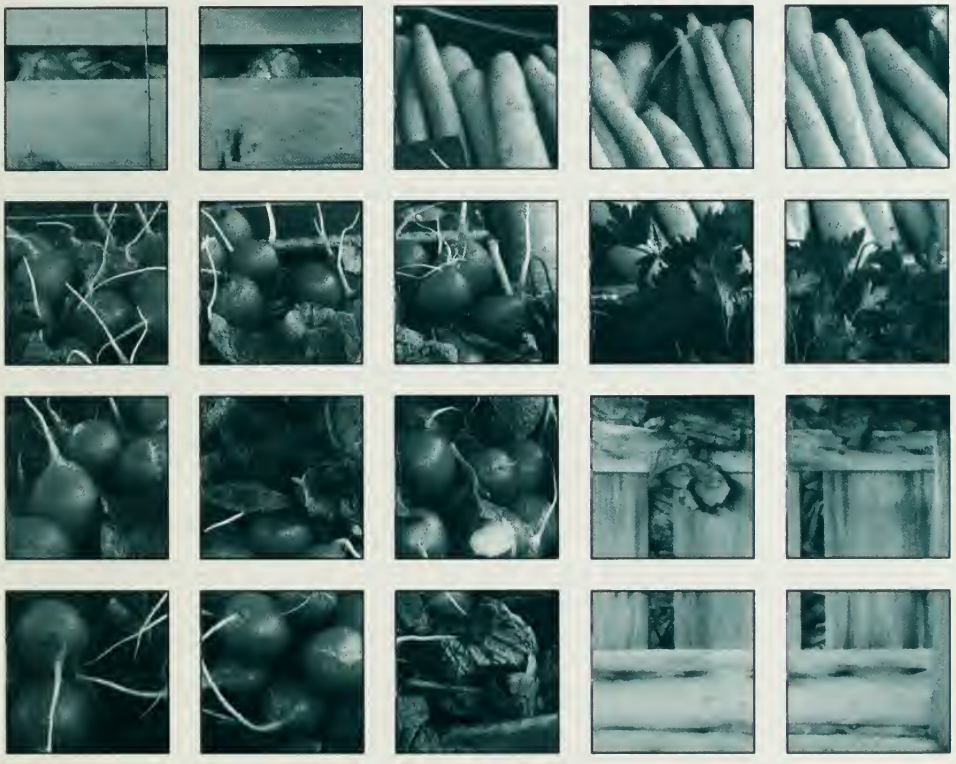
Processors (companies that freeze, can, or otherwise process fruits and vegetables) contract with experienced growers for large quantities of fruits and vegetables. New or inexperienced producers are rarely acceptable to the processor, except under such unusual circumstances as the opening of a new processing plant. Contract opportunities might exist for new growers that farm particularly close to the processing plant or that have irrigation capability.

Crops grown for processing are usually produced according to the terms of a written forward contract, which may specify variety, planting schedule, pest-control practices, acreage, and price. Mechanization is necessary, but the processing company may provide some machinery (e.g., harvesting equipment). Processors usually employ fieldmen to help advise the grower on production practices and harvest time. The grower must be located close enough to the processing plant to maintain product freshness and to economize on transportation costs. Vegetable crops grown for processing in Illinois include sweet corn, peas, pumpkins, asparagus, spinach, tomatoes, cucumbers, and kidney, lima, and snap beans. Individual growers typically produce 100 acres or more of these crops.

Part II gives a partial list of processors in Illinois and in surrounding states. Agricultural producers trying to gauge the potential of vegetable crops for processing should contact one or more nearby companies. During the winter months, fieldmen and representatives of processing companies are available to discuss the specifics of contractual arrangements.

Part I

Grades, Quality Characteristics, and Price Information for Specialty Crops



Apples

Grade information

Five grades apply to apples: U.S. Extra Fancy, U.S. Fancy, U.S. No. 1, U.S. Utility, and Combination grades. Maturity of apples can be indicated by color, and the table below specifies minimum color requirements for each grade of apple. Color specifications of these grades are best seen on a color chart.

Color Requirements for Specified U.S. Grades of Apple

Variety	U.S. Extra Fancy	U.S. Fancy	U.S. No. 1
	percent of surface of appropriate color		
Jonathan	66	33	25
Red Delicious	50	25	15
Golden Delicious	75	75	na

U.S. Extra Fancy consists of hand-picked, clean, mature, well formed apples. They should be free of decay, internal browning and breakdown, rough russeting, sunburn or sprayburn, and other external bruises or blemishes.

U.S. Fancy apples meet the same requirements as U.S. Extra Fancy except for color. U.S. No. 1 apples must meet similar grade and standard requirements as U.S. Extra Fancy and U.S. Fancy, with two major exceptions: color and russeting.

U.S. Utility apples are mature but not overripe, handpicked, and not seriously deformed. They must be free of internal and external browning, bruising, and breakdown.

Combination grades may consist of any of the following combinations:

- U.S. Extra Fancy and U.S. Fancy
- U.S. Fancy and U.S. No. 1
- U.S. No. 1 and U.S. Utility

The only requirement for the Combination grade is that at least 50 percent of the apples in any lot meet the requirements of the higher grade in the combination.

Washington has separate state grades: Washington Extra Fancy and Washington Fancy. Requirements state that apples with those grades be equal to or better than U.S. Extra Fancy and U.S. Fancy. New York State's Seal of Quality contract specifications require that apples with the seal be of better quality than U.S. Extra Fancy.

Packing, shipping, and storage

Common shipping containers are cartons and boxes, loose-packed, weighing approximately 38 to 42 lbs.; cartons and boxes, tray-packed, weighing 40 to 45 lbs.; and cartons, cell-packed, weighing 37 to 43 lbs.

As a rule, no fruit smaller than 175 fruit/carton is marketed fresh. Extra-large apples will have a carton count of 48, 56, 64 or 72; large, 80, 88 or 100; medium, 113, 125, or 138; and small, 150, 163, or 175.

Carton counts with minimum diameters include: 2 1/4 inches, 198; 2 1/2 inches, 175; 2 5/8 inches, 138; 2 3/4 inches, 125; 3 inches, 100; and 3 1/2 inches, 80.

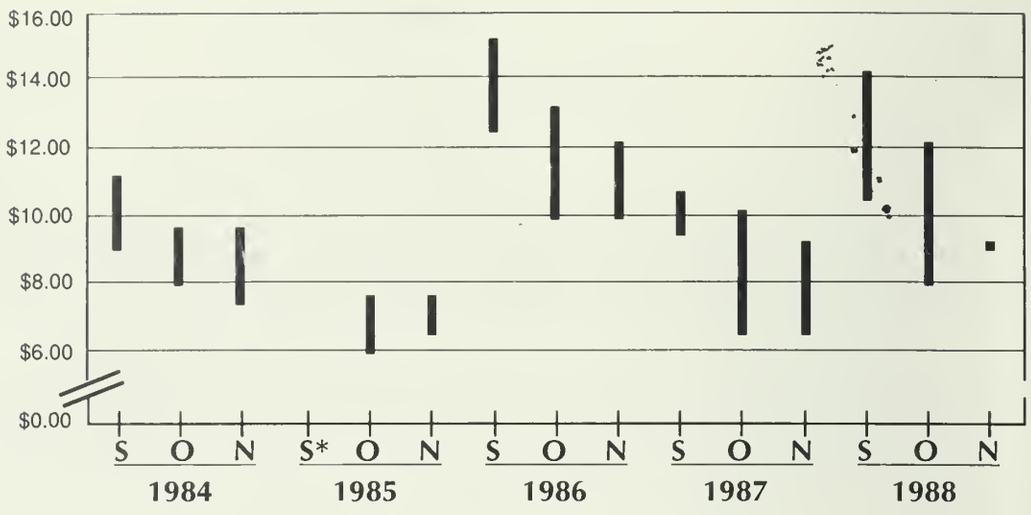
Harvest season

Illinois apples are available from late August through October.

Red Delicious Apple Prices

(Michigan Origin)

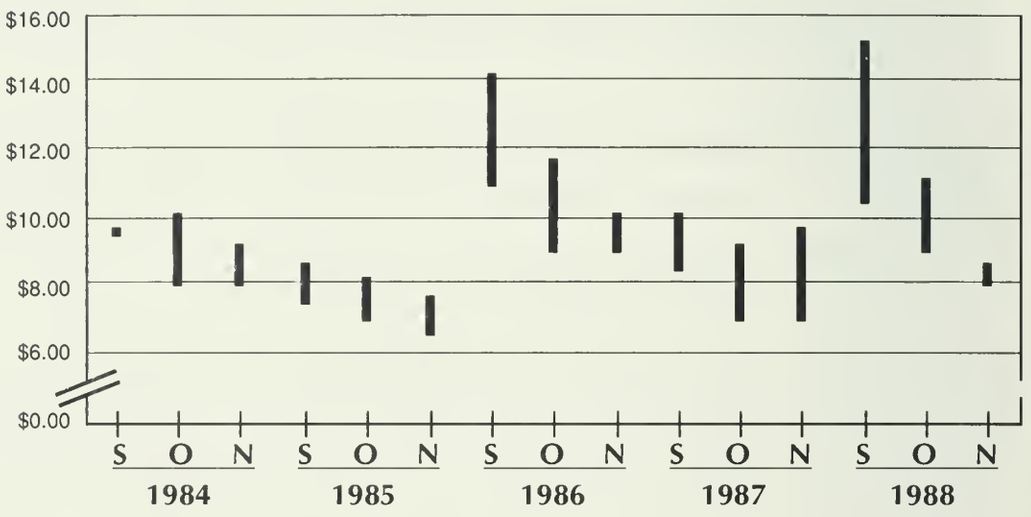
Regular storage, 12 three-pound bags, U.S. Fancy



Jonathan Apple Prices

(Michigan Origin)

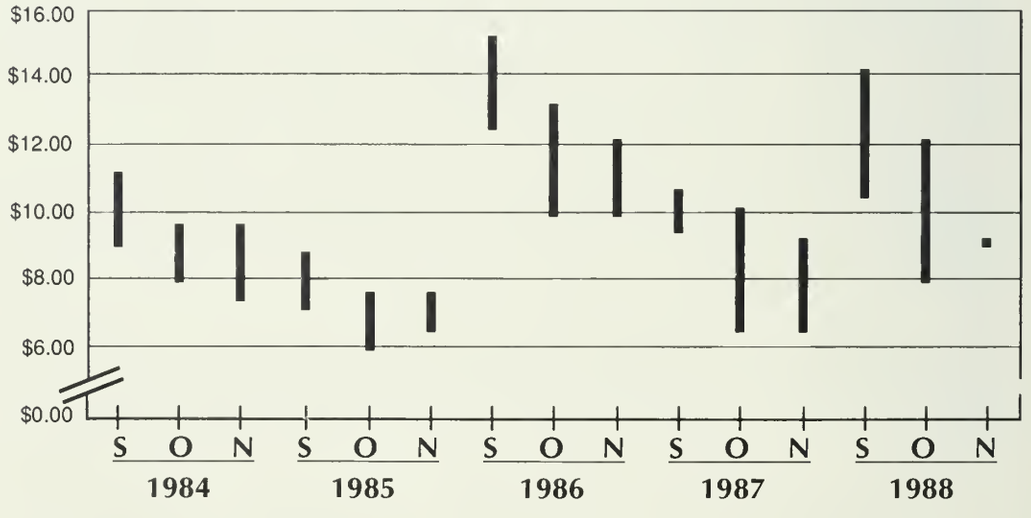
Regular storage, 12 three-pound bags, U.S. Fancy



Golden Delicious Apple Prices

(Michigan Origin)

Regular storage, 12 three-pound bags, U.S. Fancy



*Price data not available

Asparagus

Grade information

Two federal grades apply to asparagus: U.S. No. 1 and U.S. No. 2. Both grades are commercially relevant. Asparagus is inspection-graded and conditioned-graded.

Asparagus meriting the No. 1 grade must be fresh, well trimmed, and fairly straight. They should be free of decay and damage. The stalks should not be more than ½-inch thick, and color should be not less than approximately 90 percent green. But these are only general guidelines for diameter and color requirements and are subject to individual interpretation.

U.S. No. 2 stalks fail to meet U.S. No. 1 requirements for one or more of the following factors: uniformity, color, or straightness. Most shoots classified as U.S. No. 2 are irregularly shaped or white in color. Although the shape does not affect the nutritional content, most consumers shy away from stalks that are not fairly straight. White patches do affect the nutritional content as well as appearance, and for human consumption white patches on shoots are normally broken off and discarded. For these reasons, U.S. No. 2 asparagus is discounted in price.

Packing, shipping, and storage

Asparagus may be packed loose or in bunches. The number of asparagus stalks per bunch varies, although bunch quantities should be uniform. Rubber bands usually hold bunches together. Asparagus is shipped loose in pyramid-shaped, wire-bound crates holding approximately 25 to 30 lbs. Smaller quantities (13 to 17 lbs.), bunch-packed, are shipped in half-pyramid crates and in cartons, both holding 6 bunches.

Asparagus is seldom stored long, as its tissue rapidly becomes woody and/or flaccid. Asparagus needs to be cooled immediately following harvest to conserve its sugar content and maintain a fresh appearance. Fresh asparagus is characterized

by closed tips, green color, and tender stalks. If asparagus is to be stored, it should be cooled immediately to 32°F; storage time should not exceed 10 days.

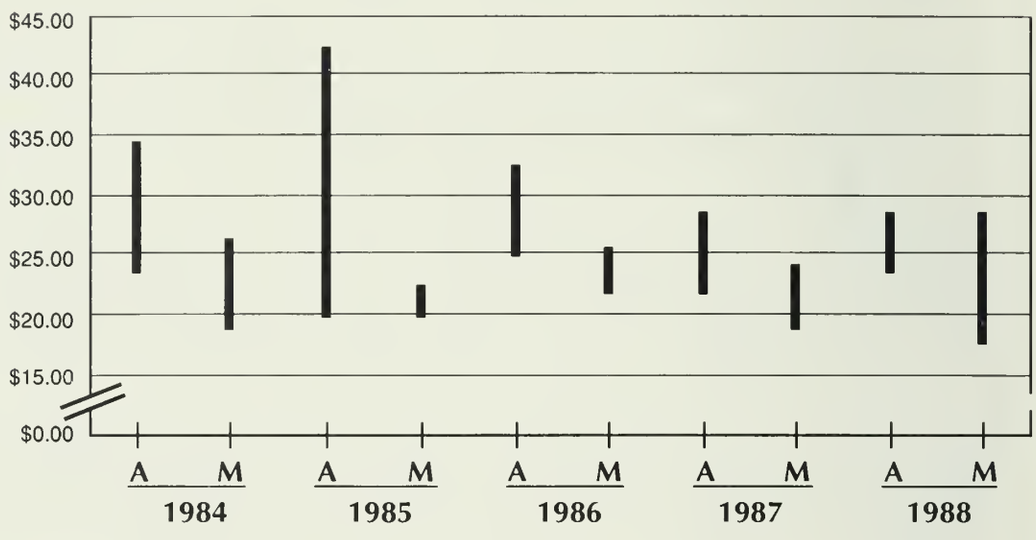
Harvest season

Asparagus has a long harvest season stretching from the end of spring to summer. In Illinois, harvest season customarily runs from mid-April to the end of June, with a peak in late May and early June.

Asparagus Prices

(California Origin)

Pyramid crates



Beans: Snap Beans and Shelled Lima Beans

Grade information

Different federal grades apply to snap beans and lima beans.

Snap Beans Four federal grades apply to snap beans: U.S. Fancy, U.S. No. 1, U.S. No. 2, and U.S. Combination. U.S. Fancy consists of young beans, fairly uniform in size, well formed, bright, clean, fresh, tender, and firm. They must be free of soft rot and damage caused by leaves, leafstems, disease, insects, or other means. Buyers seek beans of uniform size and shape. Snap beans that fail to meet U.S. Fancy requirements generally are not handled at the South Water Market.

Shelled Lima Beans Three federal grades apply to shelled lima beans: U.S. No. 1, U.S. No. 2, and U.S. Combination. Lima beans are losing favor among consumers in recent years. As marketing outlets diminish, fewer lima beans are being grown in Illinois.

U.S. No. 1 pods are fresh, fairly well filled, and not overly mature, excessively small, or misshapen. They must be free of decay, sprouted beans, worm holes, or damage from other means. The U.S. No. 2 and U.S. Combination grades are seldom used today.

Packing, shipping, and storage

Beans do not store well. Snap beans maintain their optimum quality if marketed within 7 to 10 days. Lima beans have about a one-week shelf life. Both types of beans should be stored at around 40°F. Beans are sensitive to chilling and should not reach freezing (32°F).

Beans commonly are shipped in 1 bushel or 1 1/9 bushel wax cartons.

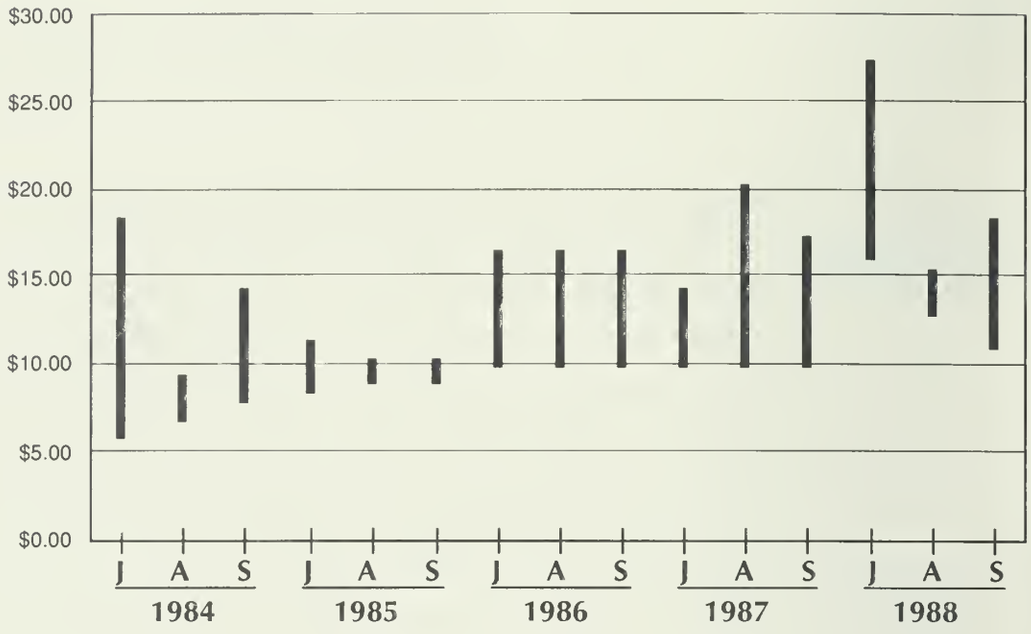
Harvest season

In Illinois, beans are harvested in July, August, and September.

Snap Bean Prices

(Illinois Origin)

Crates and bushels



Blueberries

Grade information

One federal grade applies to blueberries: U.S. No. 1. "The grade applies to selected and hybrid varieties of the highbush blueberry. General specifications require product to be clean, well-colored and not overripe, wet or affected by decay.

"Size is the general basis for sale. Larger berries bring a higher price. Size is determined by the number required to fill a half-pint measure" (The Packer).

Packing, shipping, and storage

Blueberries commonly are shipped in pint containers and packed in fiberboard flats, holding 12 pint containers and typically weighing 5 lbs.

Unlike many other types of berries, blueberries can be stored for a long time. They normally will store well for the first 3 weeks if maintained at temperatures between 33° and 34°F. If blueberries are not exposed to moisture and if temperatures and conditions are monitored closely, storage life may be as long as four to six weeks.

Blueberries stored for extended periods of time should be visually inspected regularly. Fresh-appearing blueberries are recognizable by their bright appearance and the plumpness of the fruit.

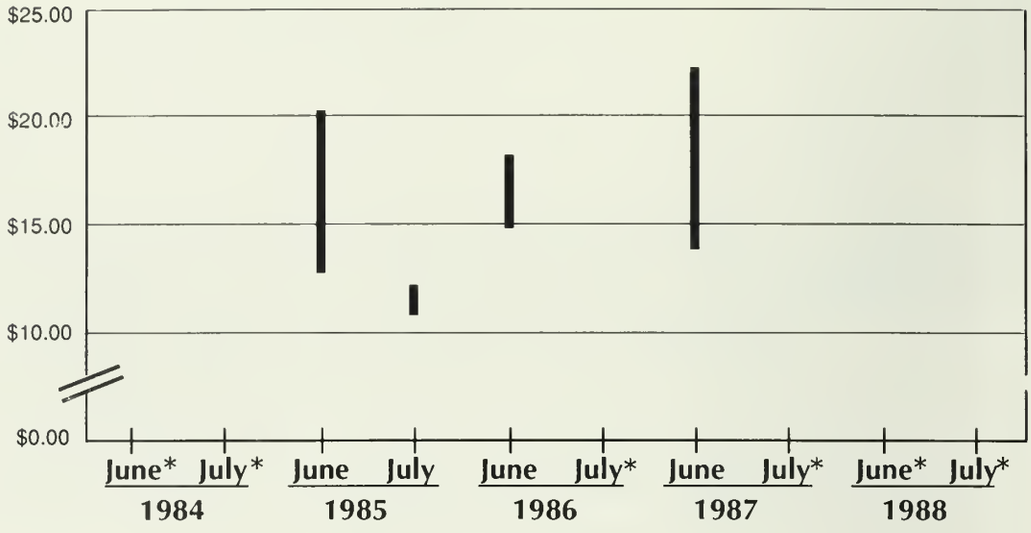
Harvest season

Few blueberries are actually grown in Illinois. They are harvested regularly during June and July.

Blueberry Prices

(Illinois Origin)

Flats of 12 pint containers



* Price data not available

Broccoli

Grade information

Three federal grades apply to broccoli: U.S. Fancy, U.S. No. 1, and U.S. No. 2. U.S. Fancy is very high quality, very elite, and very expensive. Because of its rareness and price, Fancy is not a commercially relevant grade in Chicago. On the other hand, U.S. No. 2 grade broccoli is of poor quality and is generally not sold for fresh consumption. U.S. No. 2 broccoli is overmature, irregularly shaped, or in individual shoots and is sold directly to processors.

Most broccoli sold commercially for fresh consumption falls under the No. 1 grade. U.S. No. 1 consists of compact, bunched stalks that are free of decay and damage caused by over-maturity. The bunches should be trimmed well and cut evenly at the base. The grade requires that the broccoli be 5 to 9 inches long, although this requirement is not adhered to strictly.

Packing, shipping, and storage

Broccoli can be sold in a broad range of packs. At the consumer-retail level, vacuum-sealed portioned products are becoming more popular. Processors package these portioned products; often the product is prepurchased through private contracts. They generally consist of No. 2 grade broccoli shipped loose in 15-lb. packs of 3- to 4-inch spears and 21 lbs. of loose 6-inch spears. Farmers and other shippers ship florets in 10-lb. bulk cartons and in four or six 3-lb. mesh bags. Bunched broccoli (14 per bunch) typically is shipped in cartons holding 14 to 18 bunches.

Broccoli stored at 32°F should last satisfactorily for 10 to 14 days. Stored broccoli may need to be kept moist or iced to combat evaporation and maintain freshness.

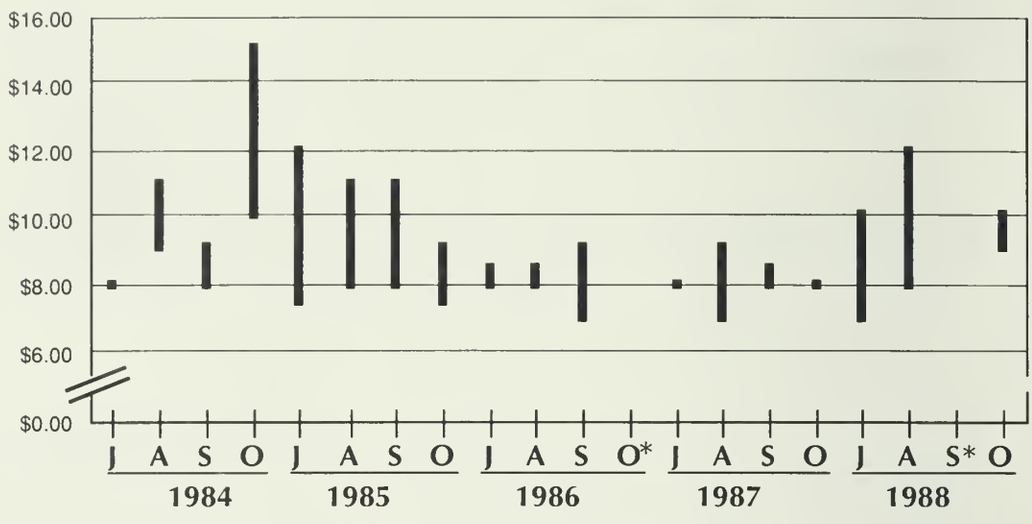
Harvest season

In Illinois, the typical harvest season for broccoli is July, August, and September.

Broccoli Prices

(Illinois Origin)

Boxes of 14 bunches



* Price data not available

Cabbage

Grade information

Two federal grades apply to red and green cabbage: U.S. No. 1 and U.S. Commercial. Only the U.S. Commercial grade is used at the South Water Market.

Cabbage are seldom officially inspected. Appearance is the most important criterion in grading. The leaves should be firmly attached. The heads must be of reasonable solidity and not withered, puffy, or burst. They should also be free of soft rot and discoloration. Cabbage that fail to meet these qualifications are drastically reduced in price or not sold at all.

Packing, shipping, and storage

Common shipping containers are flat crates, mesh sacks, or cartons; each holds 18 to 24 heads and weighs 50 to 60 lbs.

Cabbage should be stored at cool temperatures (32°F) to prevent moisture loss, which can cause wilting. Cut cabbage should be cooled as soon as possible to preserve solidity and appearance.

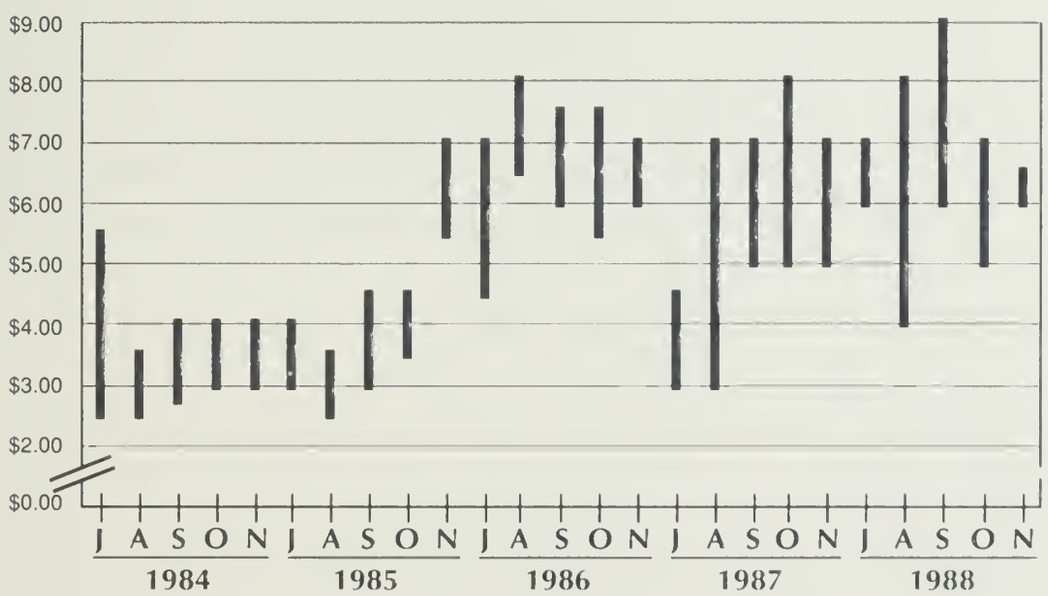
Harvest season

The cabbage harvest season is quite lengthy, running from the end of July to November.

Cabbage Prices

(Illinois Origin)

Fifty-pound cartons, medium-large size



Cantaloupe

Grade information

Four federal grades apply to cantaloupe: U.S. Fancy, U.S. No. 1, U.S. Commercial, and U.S. No. 2. Only the U.S. No. 1 and U.S. No. 2 grades are commercially relevant at the South Water Market.

Most cantaloupe are sold as U.S. No. 1, which specifies that melons be mature with good internal quality, free of damage, and not overripe, soft, or wilted.

Size and maturity are important factors in determining grade and price. U.S. No. 1 cantaloupe must be uniform in appearance and ripeness. U.S. No. 2 cantaloupe are those that fail to qualify as U.S. No. 1.

Packing, shipping, and storage

A number of containers are used to ship cantaloupe. Cartons are increasingly popular as the dominant container for packing and are replacing wire-bound crates. The most common carton packs 12, 14, or 16 cantaloupe and weighs approximately 40 lbs. Wire-bound crates are still occasionally used, and hold 45 to 50 lbs.

Cantaloupe continue to produce heat and respire after they have been picked. They should be marketed quickly or precooled to about 40°F immediately following harvest. Growers that do not have access to precooling units should keep the melons as cool as possible. Picking in the morning and storing in the shade will help maintain quality and shelf life.

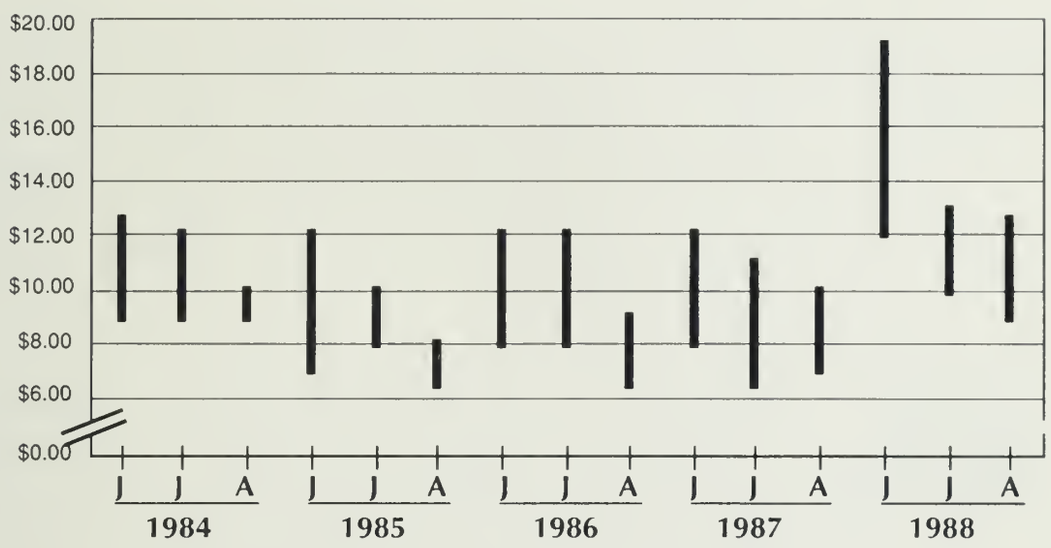
Harvest season

Few cantaloupe are grown in Illinois for the wholesale market. The harvest season is approximately July and August. Cantaloupe should be picked when they have a cream-colored net and background color. Melons have few to no reserve carbohydrates to convert to sugars, and sugars must be conserved through proper handling.

Cantaloupe Prices

(California Origin)

Cartons of 12



Cauliflower

Grade information

Only one federal grade applies to cauliflower: U.S. No. 1. Heads must be fresh, compact, and not discolored, overmature, soft, or wilted. They must be free of dirt, disease, insects, and other damage.

Cauliflower sales are determined mostly by the quality of the product. Superior quality is indicated by the whiteness of the color and the firmness or compactness of the curd. The most desirable size is approximately 6 inches in diameter.

Tan or speckled heads are sold at a discount; soft heads are rarely sold.

Packing, shipping, and storage

Cauliflower may be shipped wrapped or unwrapped. Most cauliflower is trimmed and shipped film-wrapped in a transparent film. All cauliflower should be packaged uniformly according to size and color. Common shipping containers for cauliflower are 21- to 25-lb. cartons and crates holding 40 or 60 lbs.

Cauliflower usually may be stored satisfactorily for two to three weeks if preserved at 32°F. When storing cauliflower, turn the heads down to prevent moisture buildup on the curds.

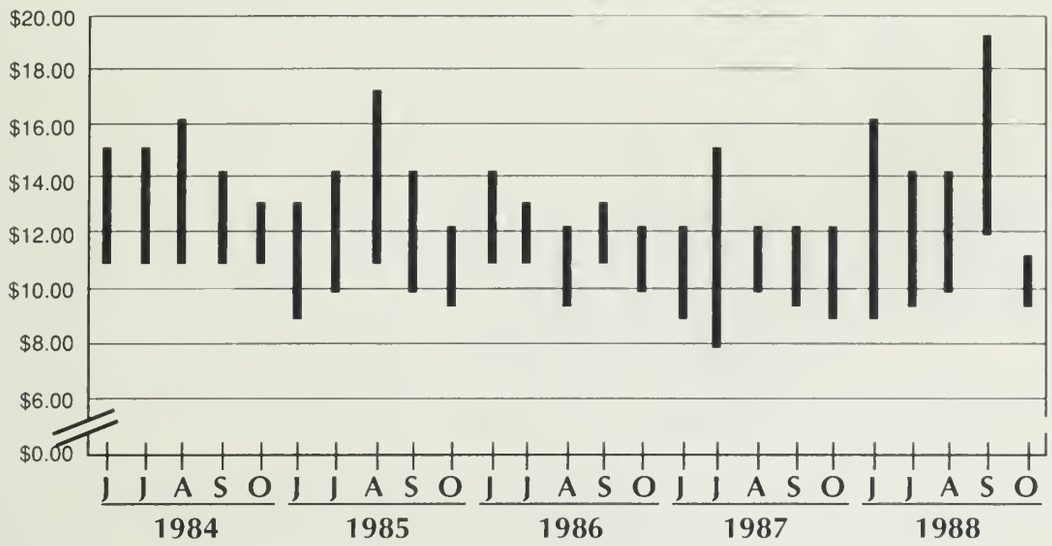
Harvest season

Cauliflower grown for the wholesale market are usually harvested in September and October.

Cauliflower Prices

(California Origin)

Cartons of 12, film-wrapped



Corn, Sweet

Grade information

Three federal grades apply to sweet corn: U.S. Fancy, U.S. No. 1, and U.S. No. 2. The No. 1 grade is virtually obsolete in Chicago commerce. U.S. Fancy and U.S. No. 2 are discussed below. Corn meeting both grades must be trimmed, well developed, and free of damage.

U.S. Fancy is the principal grade sold today. U.S. Fancy sweet corn is well trimmed; well developed; and free of smut, worms, insects, or other injury. Cobs should be at least 6 inches long, well filled, and unclipped with milky kernels covered with fresh husks.

U.S. No. 2 requirements are similar but more lenient. The ears may be clipped or unclipped; the cob need only be 4 inches long and need not be completely covered with fresh silk. The No. 2 grade generally consists of ears that are small or irregular in shape and/or filled incompletely. Ears must be free of worms and insects.

Any sweet corn infected with worms, disease, or smut will not intentionally be sold commercially.

Packing, shipping, and storage

Sweet corn typically is shipped in wire-bound crates or wax cartons that weigh 40 to 60 lbs. It is seldom stored and then only for short periods, because the sugar deteriorates rapidly. The supersweet varieties store better than normal varieties—up to 7 to 10 days if cooled properly.

Large shippers cool sweet corn rapidly with a process called "hydrocooling." The recommended storage temperature for sweet corn is 32° to 34°F.

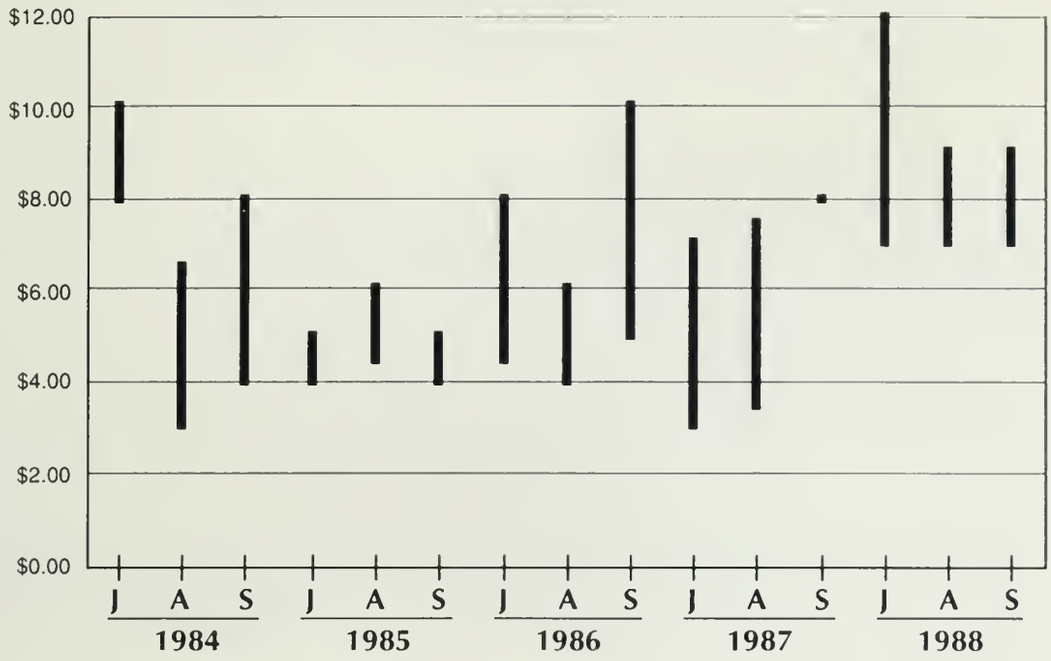
Harvest season

In Illinois, sweet corn production typically runs from June to September, and production peaks in July and August.

Sweet Corn

(Illinois Origin)

Cartons and crates, 4 to 5 dozen, pre-cooled



Cucumbers

Grade information

Six federal grades apply to field-grown cucumbers: U.S. Fancy, U.S. Extra No. 1, U.S. No. 1, U.S. No. 1 Small, U.S. No. 1 Large, and U.S. No. 2. Commercial cucumbers are not sold under these grades, but as: Super Select, Select, Choice or Fancy, and Combination. If one disregards the U.S. No. 2 grade because of its unacceptable quality, then the five remaining federal grades pretty closely match the classifications actually used in trade. The trade names corresponding to the federal grades appear in parentheses below.

U.S. Fancy (super select) cucumbers should be straight, at least 6 inches long, and not more than 2 3/8 inches in diameter. They should be fresh, firm, and free of dirt, disease, insects, and injury or damage to the surface.

U.S. Extra No. 1 (select) consists of a combination of U.S. Fancy and U.S. No. 1 cucumbers. Length and diameter requirements are the same as for U.S. Fancy. Requirements for U.S. Extra No. 1 stipulate that at least half of any lot should meet the U.S. Extra Fancy grade.

U.S. No. 1 (choice or fancy) cucumbers are fairly well formed and reasonably straight. They should be free of dirt, sunburn, and damage to the surface. Length and diameter requirements for the No. 1 grade are 6 and 2 3/8 inches, respectively.

U.S. No. 1 Small and U.S. No. 1 Large (combination) meet all requirements for the U.S. No. 1 grade except size. Smalls have no requirements for length, and the diameter should be 1 1/2 to 2 inches. Larges should be at least 2 1/4 inches in diameter and at least 6 inches long.

U.S. No. 2 cucumbers are not straight. Cucumbers in this grade fail to meet the above quality requirements. Few, if any, No. 2 cucumbers are sold at the South Water Market.

Packing, shipping, and storage

Cucumbers usually are shipped in wax fiberboard boxes or wire-bound crates. Most cucumbers are shipped in 1 1/9 bushel wax boxes.

Cucumbers store well for 10 to 14 days if temperatures are maintained at 45° to 50°F. If temperatures fall below this level, chilling damage may occur; if temperatures exceed this level, cucumbers will continue to ripen and eventually turn yellowish. Ventilation may be needed to preserve quality and prevent gaseous buildup. Cucumbers naturally produce ethylene gas, which tends to augment the ripening process.

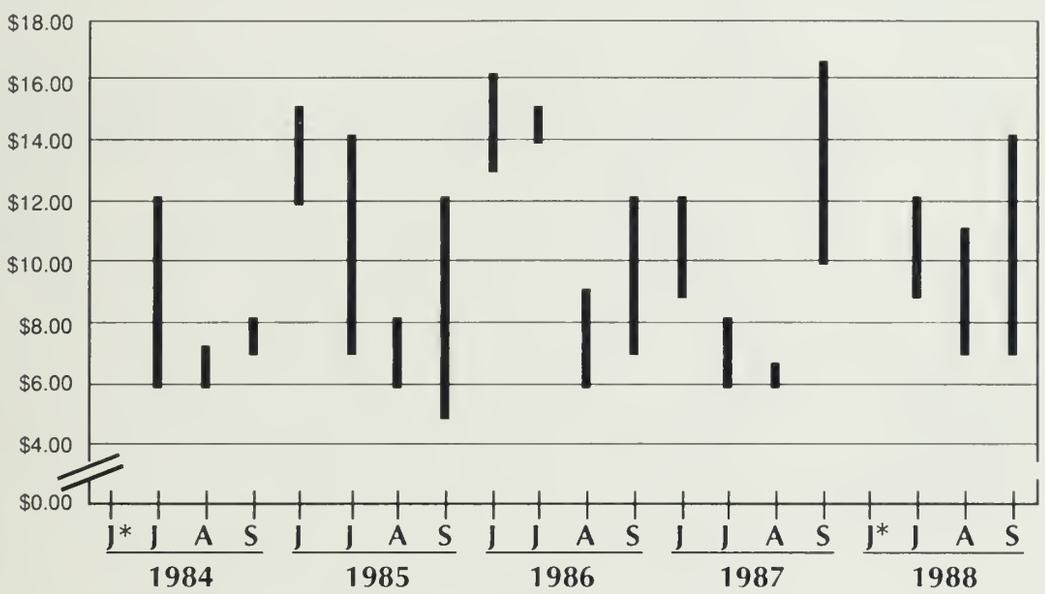
Harvest season

In Illinois, the harvest season for cucumbers typically runs from June to September.

Cucumber Prices

(Illinois Origin)

Bushels, medium size



* Price data not available

Greens, Leafy

Many types of greens are grown in the United States, including broccoli greens, collard, dandelion, turnip, mustard, kale, beet, swiss chard, and more. In Illinois, the primary greens grown for retail sale are broccoli greens, collard, dandelion, kale, mustard, and turnip. Because the federal grading standards for greens are all similar, they are discussed together here. For a more detailed individual discussion of the grades, storage, and merchandising of greens see *The Packer: 1989 Produce Availability & Merchandising Guide* (Vol. 96, No. 53, pp. 143-148).

Grade information

The sole commercially relevant federal grade is U.S. No. 1, the top grade. Only U.S. No. 1 greens are sold at the South Water Market.

General specifications for No. 1 greens are that the product be clean, fresh, tender, and well trimmed. The greens should be unstunted and free of damage and decay. These guidelines apply to plants and to cut leaves but not to mixtures of plants and leaves or mixtures of greens.

Packing, shipping, and storage

Common shipping containers for greens are bushel baskets, wire-bound crates, and cartons that hold on the average 20 to 25 lbs. (excluding the ice they are packed in). Greens may be shipped loose or in bunches. Most greens are shipped in bunches, and bunch sizes still vary considerably. Crate and carton containers generally contain 12 to 24 bunches; bushel baskets (declining in use) are used to ship various amounts.

All greens are stored similarly. Greens should be packed in ice immediately following harvest to preserve freshness. Maintained at 32°F, greens normally will store acceptably for 10 to 14 days. They should be maintained at this temperature during storage, transporting, and marketing, until they reach the consumer.

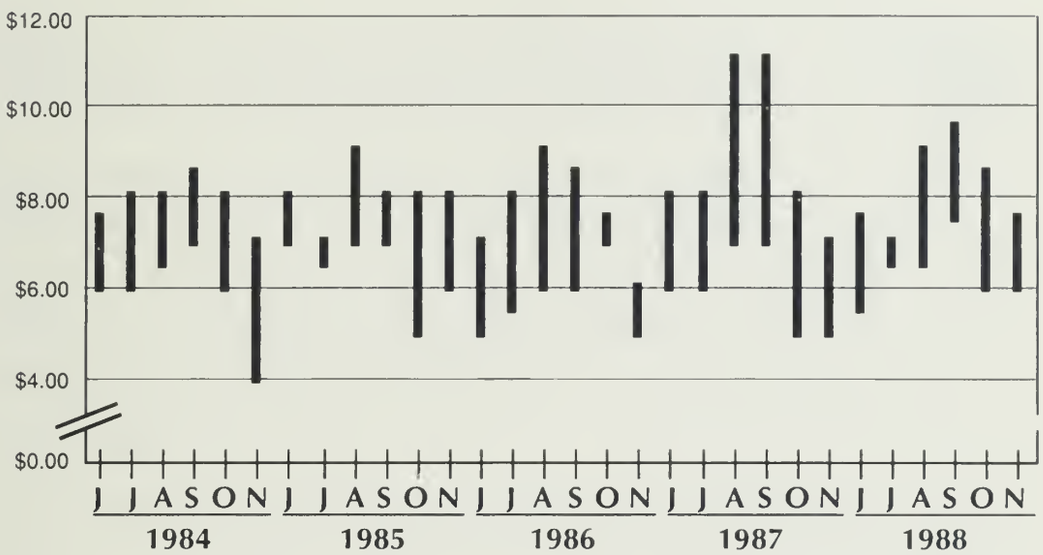
Harvest season

Greens can be purchased at the retail level year-round. In Illinois, the harvest season for greens is lengthy; it normally starts in June and runs through to November.

Greens Prices (Collards, Mustard, and Turnip Tops)

(Illinois Origin)

Bushels of 15 to 18 bunches



Herbs

Grade information

There are no official USDA grades for herbs, but many buyers have rigid shipping guidelines. Buyers purchase herbs based on leaf shape, and, to a lesser extent, color. Illinois is not a major herb growing state.

Packing, shipping, and storage

Most herbs are shipped in bulk containers or in packages containing 6, 12, or 30 bunches. All herbs should be stored at 37° to 38°F and kept moist or on ice to preserve freshness.

Harvest season

Herbs intended for retail sale generally are grown in greenhouses and are thus available year-round.

Because of differences in market factors for different herbs, there is no representative herb price series.

Mushrooms

Grade information

Two grades apply to mushrooms: U.S. No. 1 and U.S. No. 2. The most common grade at the South Water Market is U.S. No. 1, although both grades are commercially relevant.

Mushrooms that meet the U.S. No. 1 standard must be shaped fairly well, trimmed well, and free of damage. Buyers prefer uniform packages. Size qualifications for U.S. No. 1 small to medium mushrooms are up to 1 5/8 inches in diameter. Large mushrooms are more than 1 5/8 inches in diameter.

U.S. No. 2 requirements are similar to U.S. No. 1. Misshapen and/or asymmetrical mushrooms are categorized as U.S. No. 2.

Packing, shipping, and storage

Common shipping packs for *Agaricus bisporus* (a common variety of mushroom) are cartons containing three, eight, or twelve 1-lb. packages, ten 12-oz. packages, and twelve 8-oz. overwrap packages. Bulk quantities are also shipped as 3-, 5-, or 10-lb. overwrapped loose units. The 8-oz. package is the most popular.

Mushrooms are extemely perishable; life expectancy is generally one week, depending on the variety. They should be packed, shipped, and marketed as rapidly as possible to preserve freshness. They should be stored at 34°F or as cool as possible without freezing. Ventilation may be needed to preserve uniform temperature. Mushrooms are sensitive to water and may develop brown spots and/or wrinkles; this procedure thus should not be used for cooling. Shippers commonly refrigerate or vacuum-cool the product after packaging.

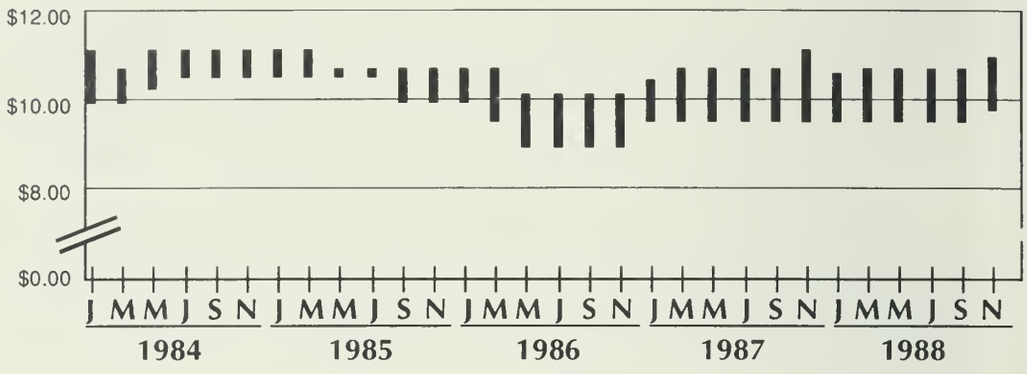
Harvest season

Today, most mushrooms are grown in artificially controlled atmospheres and are available year-round. The harvest season does not depend on the exterior climate.

Mushroom Prices

(Pennsylvania and Illinois Origin)

Ten-pound loose cartons



Onions, Dry

Grade information

The federal grades for dry onions vary according to type. Bermuda-Granex-Grano or Creole type onions are generally not grown in Illinois. Dry onions other than Bermuda-Granex-Grano and Creole types are federally classified as U.S. No. 1, U.S. Export No. 1, U.S. Commercial, U.S. No. 1 Boilers, U.S. No. 1 Picklers, and U.S. No. 2. Few, if any, Illinois onions are sold in the export market; instead yellow onions and, to a much lesser extent, white onions are primarily grown.

Generally, the firmer or the harder the onion, the better the quality. U.S. No. 1 onions are firm, well shaped, and mature and are free of splits, cracks, decay, and foreign matter. They should be at least 1 ½ inches in diameter. Most dry onions sold on the South Water Market are U.S. No. 1.

U.S. Commercial requirements are similar to U.S. No. 1 except for age. Commercial onions are more mature than U.S. No. 1, but they are not soft or spongy. Other general specifications, including diameter requirements, are the same as U.S. No. 1.

The Boiler and Pickler grades are used to classify the smaller-sized onions. Both grades have the same requirements as U.S. No. 1 except for size. Boilers must be at least 1 inch in diameter; Picklers cannot be more than 1 inch in diameter.

U.S. No. 2 onions do not have to meet the above standards but still cannot be sprouted. They are the poorest quality dry onions, commonly referred to as "peelers."

Although size does not determine quality, it is an important factor in packaging. Each grade of dry onions is subdivided by size into small, medium, and large. No exact diameter requirements for these sizes are specified, as they vary according to

individual interpretations. Growers should first group onions of similar quality and maturity, then subdivide these groups according to size.

Packing, shipping, and storage

Dry onions are shipped loose, in either 50-lb. mesh bags or 3-lb. units. The 50-lb. mesh bags commonly are used to ship more mature and/or poorer quality onions (i.e., Commercials and, especially, U.S. No. 2s). The premium grades of dry onions, U.S. No. 1 Boilers and Picklers, commonly are shipped in twelve 2- to 3-lb. units or in sixteen 3-lb. units. There are packaging combinations other than those mentioned above. It is commercially acceptable to package any grade of dry onion in the 50-lb. bags or in 3-lb. units.

If cured and stored properly, onions can be held for six to eight months. Onions should be kept as dry as possible and refrigerated at 32°F. Refrigeration retards sprouting and decay. Onions, as can be seen in grocery stores, may be held for a short time at room temperature if they are kept dry.

Onions are usually cured prior to storage or shipping. Storage temperatures between 85° and 90°F and constant air movement between the onions for four to five days encourages rapid drying. Field curing at 75° to 80°F and 60 to 70% relative humidity can be used, but this process takes two to three weeks. Onions cured in the field must be kept sheltered from rain.

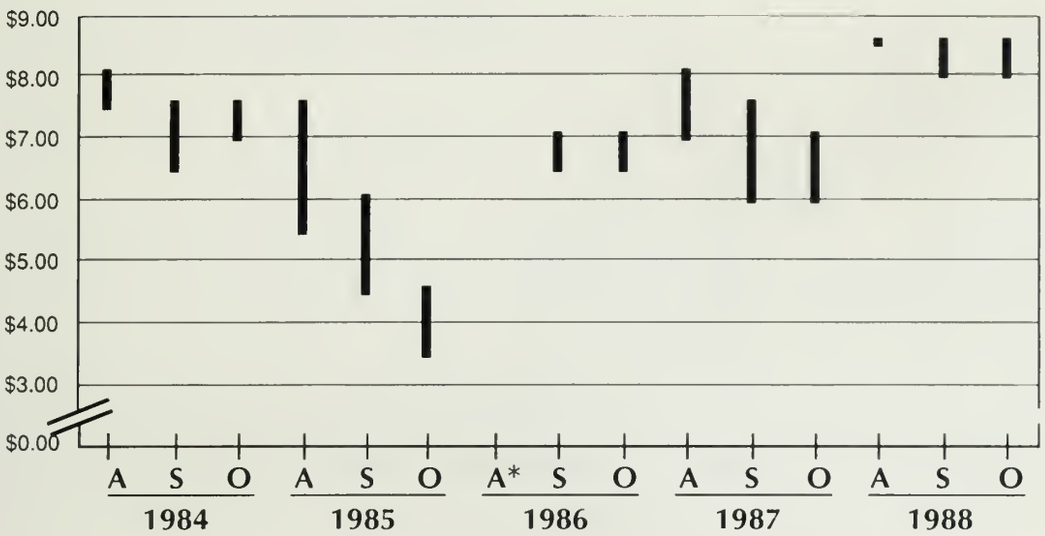
Harvest season

Because of their ability to withstand long storage periods, dry onions are available year-round. In Illinois, the typical harvest season for yellow onions is August through October.

Dry Onion Prices

(Michigan Origin)

Fifty-pound bags, medium size yellow onions, U.S. No. 1



*Price data not available

Onions, Green

Grade information

Two federal grades apply to green onions: U.S. No. 1 and U.S. No. 2. Most green onions sold commercially are U.S. No. 1.

U.S. No. 1 green onions are well formed, young, tender, and firm and are free of damage, bruises, dirt, and other foreign matter. The bulbs should be trimmed well and the tops fresh and cut evenly. U.S. No. 1 green onions should be 8 to 24 inches long and 1/4 to 1 inch in diameter.

U.S. No. 2 green onions are misshapen and not as tender or fresh as U.S. No. 1s. Diameter requirements may vary from 1/4 to 1 1/2 inches.

Packing, shipping, and storage

Most green onions are shipped fresh in wax-treated, waterproof, 15- to 25-lb. cartons that hold four dozen bunches. The number of individual onions per bunch varies, but the bunch sizes should be fairly uniform overall.

Unlike dry onions, green onions are highly perishable and thus are marketed fresh. If ice-packed at 32°F, green onions may be stored for 3 to 4 days. Green onions are normally ice-packed to maintain the cool temperature and to supply moisture to keep the leaves from wilting.

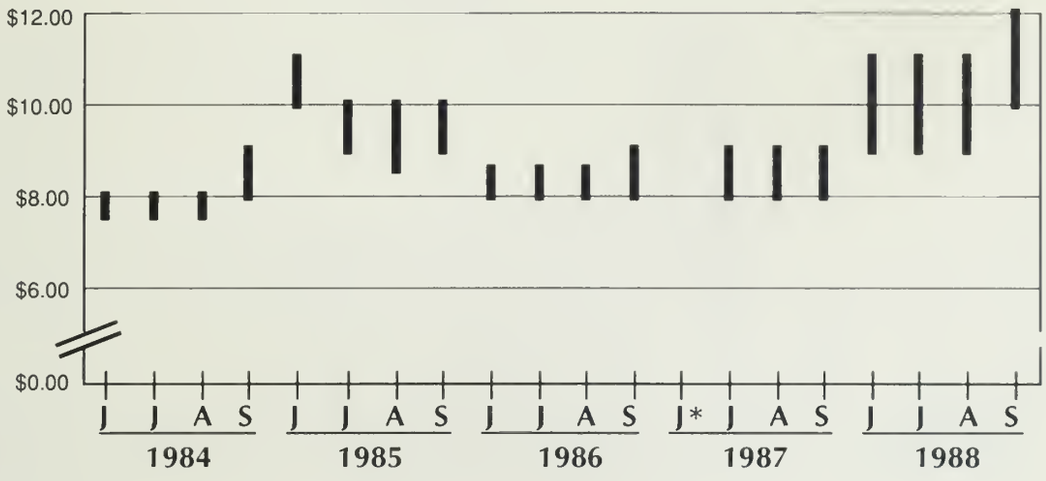
Harvest season

Like dry onions, green onions are marketed year-round. In Illinois the typical harvest season for green onions is June, July, and August.

Green Onion Prices

(Illinois Origin)

Cartons of 48 bunches



*Price data not available

Peas

Different federal grades apply to fresh peas and southern peas. There are no federal grade standards for snow peas. Illinois is not a major producer of southern peas.

Grade information

Two federal grades apply to fresh peas, more commonly known as "English peas": U.S. No. 1 and U.S. Fancy. The preponderant grade sold in Chicago is U.S. No. 1. Grading considerations include color, size, firmness, and freedom from decay.

U.S. No. 1 fresh peas have pods that are not overmature, excessively small, misshapen, or water-soaked. They should be fresh and free of splits, mildew, dirt, leaves, insects, diseases, and other damage. U.S. Fancy fresh peas are those that fail to meet U.S. No. 1 specifications.

Packing, shipping, and storage

Peas most commonly are shipped ice-covered in 10-lb. cartons or 1 1/9 bushel containers.

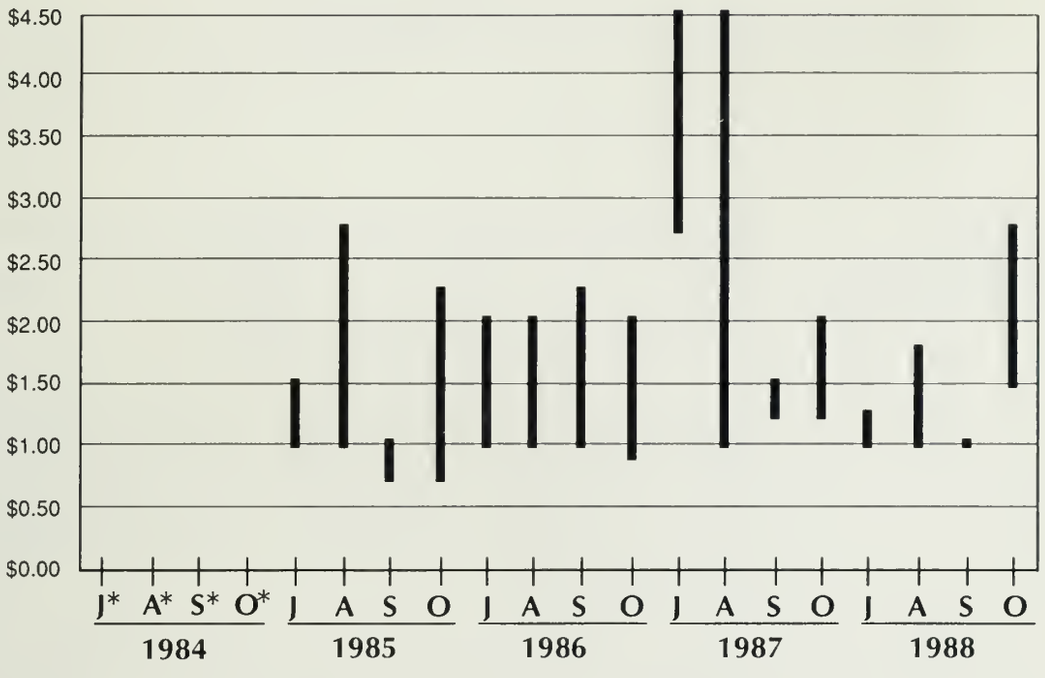
Harvest season

In Illinois, peas are generally harvested from July to October.

Pea Prices

(California Origin)

Dollars per pound



* Price data not available

Peppers

Grade information

Three federal grades apply to sweet bell peppers: U.S. Fancy, U.S. No. 1, and U.S. No. 2. Only the No. 1 and No. 2 grades are used at the South Water Market.

U.S. No. 1 sweet bell peppers are mature, firm, green, and well shaped. They must be free of sunscald, sunburn, freezing, decay, disease, insects, and other external scars. U.S. No. 1 peppers should be at least 2 1/2 inches in diameter and at least 2 1/2 inches long.

U.S. No. 2 requirements call for firm, not seriously misshapen, green peppers that are free of sunscald, sunburn, and decay. They should be free of serious damage caused by freezing, disease, insects, or other means. For peppers sold commercially, usually only those that are irregularly shaped or misshapen are classified as U.S. No. 2.

Packing, shipping, and storage

U.S. No. 1 is the primary grade of peppers sold in Chicago. Peppers should be packaged uniformly by size and, to a lesser degree, shape. The No. 1 grade is subdivided into small, medium, and large. This is a subjective division, and no size requirements can be listed.

As peppers mature they tend to turn from green to red in color. Most peppers are picked and sold at an immature stage.

Common shipping containers for peppers are wire-bound crates and cartons. Both hold 1 bushel or 1 1/9 bushels.

Peppers do not store well even under optimal conditions. Stored at temperatures between 45° and 50°F, peppers can be expected to last for 8 to 10 days at most.

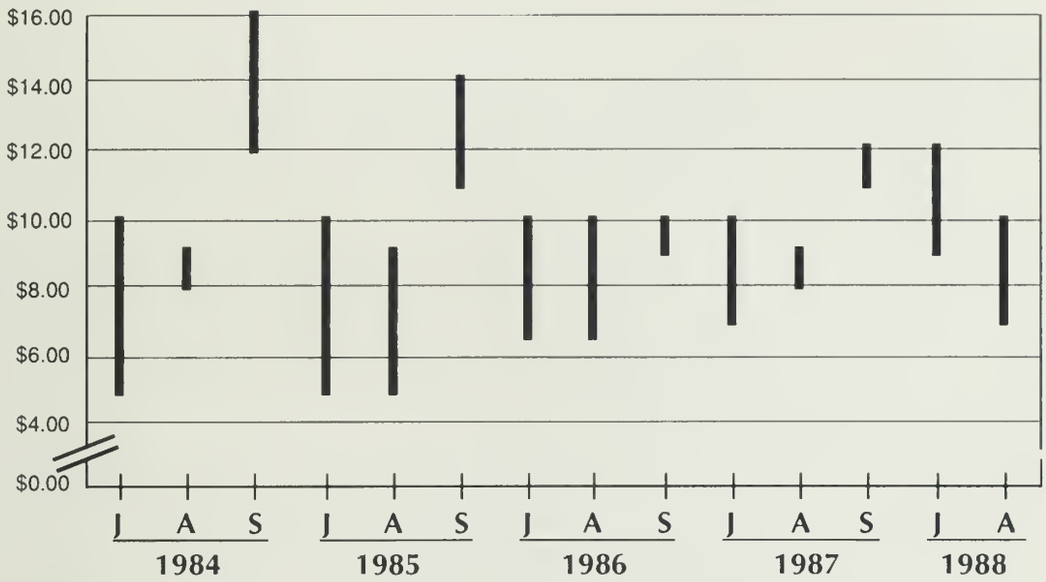
Harvest season

July, August, and September are normal harvest months for peppers grown in Illinois.

Pepper Prices

(Illinois Origin)

Bushels, large size



Potatoes

Grade information

Different grades apply to seed potatoes and regular table stock potatoes. No seed potatoes are grown or sold in Illinois markets; regular potatoes are discussed below.

Four federal standards apply to regular potatoes: U.S. Extra No. 1, U.S. No. 1, U.S. Commercial, and U.S. No. 2. Only two of these grades are commercially relevant at the South Water Market: U.S. No. 1 and U.S. No. 2.

U.S. No. 1 potatoes (the more common of the two) are the industry standard. General qualifications are that No. 1 potatoes be firm, clean, well trimmed, well shaped, and free of disease or other internal defects. Buyers demand a clean, uniform, disease-free product. Federal specifications require that U.S. No. 1 potatoes be at least 1 7/8 inches in diameter, but this federal requirement is not enforced strictly.

U.S. No. 2 potatoes are soft or too poorly shaped to be categorized as U.S. No. 1. They are sold at a discount.

For information and classification of potato disorders, contact the United Fresh Fruit and Vegetable Association, North Washington at Madison, Alexandria, VA 22314.

Packing, shipping, and storage

A variety of containers are used for shipping. At the farm level, farmers are responsible for washing, sizing, and grading the potatoes. Potatoes are shipped from farms in 100-lb. burlap sacks and 50-lb. cartons. Cartons are gaining popularity because they are easier to stack. U.S. No. 2 potatoes are almost always shipped in 100-lb. sacks; U.S. No. 1 potatoes are shipped both ways. Brokerage houses and larger shippers also sell potatoes in more convenient 5-, 10-, 15-, and 20-lb. mesh or polyvinyl plastic consumer bags.

Potatoes are susceptible to damage from heat and cold. Excessive heat advances the spoilage rate, and excessive coldness causes freezing damage. Potatoes should be stored at 50° to 60°F. Ventilation may be needed to maintain a constant and uniform temperature.

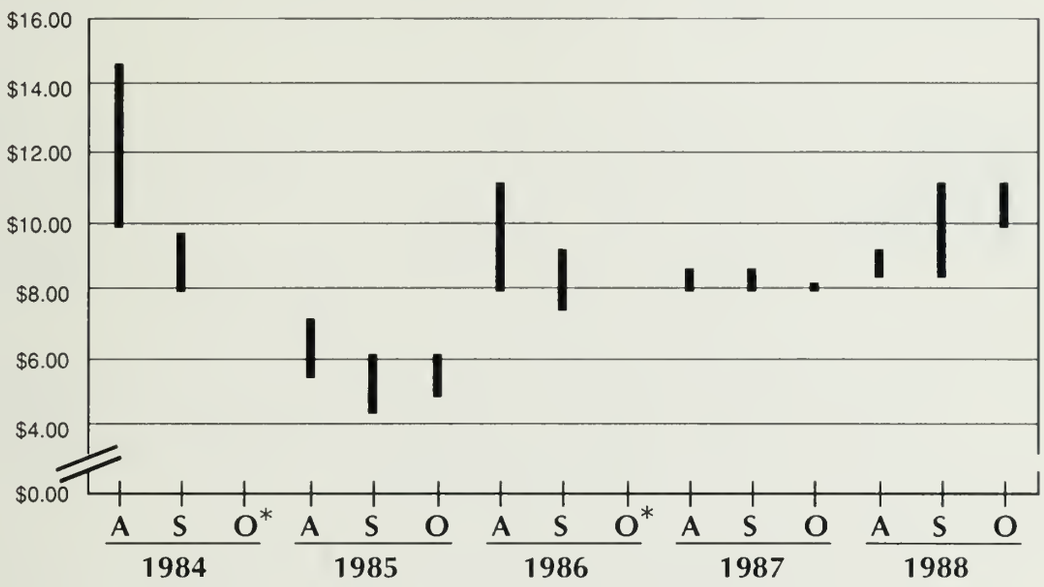
Harvest season

Potatoes mature in the fall. Depending on the temperature, the harvest season begins in September and ends in November.

Potato Prices

(Wisconsin Origin)

Hundred-pound burlap sack, round whites, U.S. No. 1



* Price data not available

Pumpkins

Grade information

No federal grades apply to pumpkins, but buyers look for pumpkins without cracks, scarring, soft spots, and wet breakdown. Size, shape, and color are also important factors.

Pumpkins should not be picked until they reach full maturity. Mature pumpkins should have a rich, orange color and a dry stem.

Packing, shipping, and storage

Pumpkins should be packaged uniformly by size and shape. Various types of crates are used for shipping, including cantaloupe crates, cabbage crates, 1 1/9 bushel crates, and bulk bins. Bulk bins hold various amounts depending on their size; crates typically hold three to six pumpkins each.

Pumpkins, like watermelons, are purchased both individually and on a per-pound basis. Price per pound is approximately equal under both methods.

Pumpkins normally do not keep as well as hard-shelled or winter squashes. Pumpkins stored at 50° to 55°F ordinarily will store safely for 1 to 2 months. Depending on the variety, pumpkins can be stored up to 3 months. When storing pumpkins, be careful to avoid injury from overchilling.

Harvest season

Most pumpkins grown in Illinois are marketed fresh. The traditional pumpkin harvest season in Illinois is September and October, with harvest season peaking in middle to late October for Halloween use.

Because price information is not available for pumpkins sold in Illinois, no price information is presented here.

Raspberries and Other Brambles (Blackberries, Dewberries)

Grade information

Two federal grades apply to these berries: U.S. No. 1 and U.S. No. 2. Only U.S. No. 1 is commonly sold at the South Water Market. U.S. No. 1 berries are well colored and well developed but not overripe. They are free of dirt, disease, insects, and moisture. At least 90 percent of any lot must meet the above criteria to be classified as U.S. No. 1. Berries that fail to meet No. 1 requirements are sold at discount.

Packing, shipping, and storage

Most bramble berries are shipped in pint or half-pint containers in fiberboard trays. A typical tray holds 12 half-pints, weighing 5 ½ to 7 ½ lbs. Trays holding 12 pints are also used, with a net weight of 11 to 15 lbs.

Because berries are highly perishable, they usually are not stored for more than 2 to 3 days. Berries to be stored are normally precooled immediately after harvest to 32°F and shipped refrigerated. Cooling retards the decaying process.

Farmers unable to precool their produce should market it immediately after harvest. Fresh berries are recognizable by their bright appearance and plumpness.

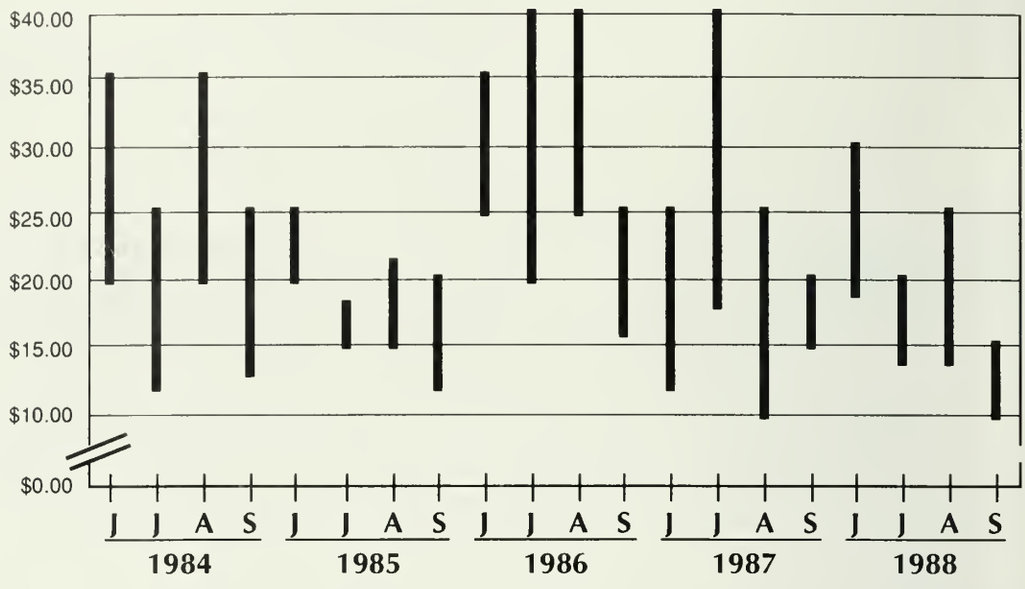
Harvest season

In Illinois, the harvest season for bramble berries ranges from late June to the middle of September.

Raspberry Prices

(California Origin)

Flats of 12 half-pint containers, film-wrapped



Spinach

In Illinois, both loose leaves and whole plants are grown and marketed. Grades of spinach vary according to whether they refer to leaves or plants, but the federal grade definitions for both are similar.

Grade information

Spinach plants are graded U.S. No. 1 or U.S. Commercial. Spinach leaves, the more common commercial type of spinach, are graded U.S. Extra No. 1, U.S. No. 1, and U.S. Commercial. Grade definitions for both leaves and plants pertain to only one type of variety, such as the crinkle leaf type or flat leaf type, but not to mixtures of the two.

The premium grade for both plants and leaves should be clean and well trimmed. They should be free of coarse stalks, seed-stems, seedbuds, crowns and roots, and burs. They should be free of discoloration, wilting, freezing, disease, insects, and any other damage. At least 95 percent, by count, of any lot must meet these requirements to be classified as U.S. Extra No. 1.

U.S. No. 1 spinach leaves must meet the requirements for U.S. Extra No. 1, except cleanliness is not stipulated. At least 90 percent of any lot must meet these requirements to be classified as U.S. No. 1.

U.S. Commercial spinach leaves have similar standards, but only 80 percent, by count, of any lot must meet the specific requirements.

Packing, shipping, and storage

Spinach plants and leaves (simply called "spinach" below) are shipped both bunched and loose. Spinach is commonly shipped loose from farms and bunched at terminal markets. Loose spinach, packed in ice, is shipped in 20- to 22-lb. units in bushel containers and wire-bound crates. At the terminal markets the spinach is again washed, sorted, trimmed, and then packaged into transparent bags weighing 8 to 16 oz.

Most spinach is marketed fresh rather than stored, because of its perishability—its high respiration rate makes spinach one of the most perishable commodities of all fruits and vegetables. It is important to cool the product to approximately 33°F immediately after harvest to slow the respiration rate. Traditionally spinach was packed with ice immediately after harvest. Today this process is greatly speeded with the aid of hydrocooling. Many growers continue to use ice-packing successfully to cool spinach, although hydrocooling can extend the shelf-life by lowering the temperature more rapidly and slowing the respiration rate more quickly.

Cooled quickly and maintained at 33°F, spinach should retain its quality satisfactorily for 10 to 14 days. Ventilation may be needed to sustain an even temperature distribution. Stored spinach should be visually inspected on a regular basis. High-quality spinach is characterized by fresh, crisp leaves with good green color. Wilting leaves is one of the first signs of aging spinach.

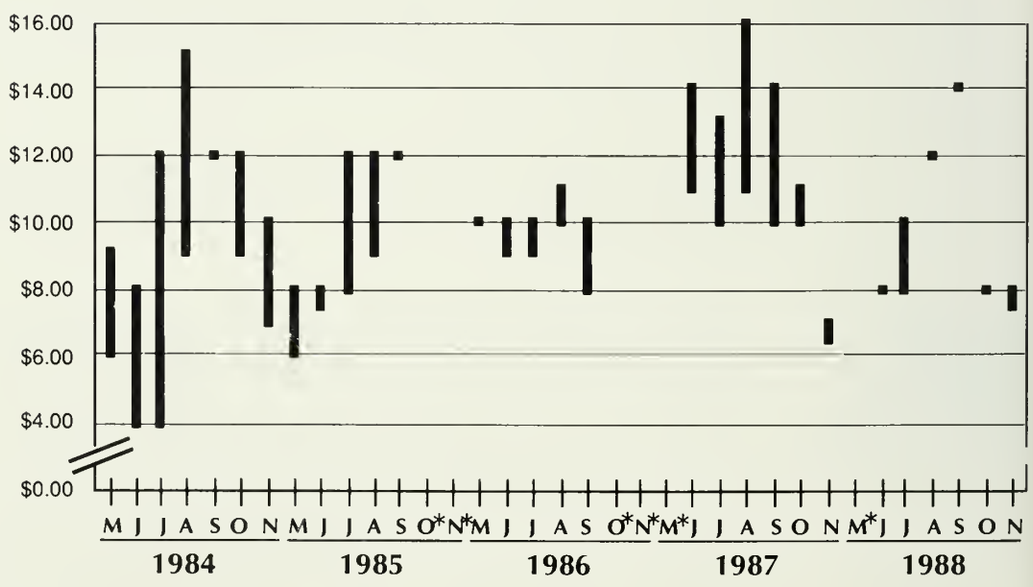
Harvest season

Spinach is planted, grown, and harvested during the cool months. In Illinois, spinach typically is marketed in May, June, July, and August.

Spinach Prices

(Illinois Origins)

Bushel baskets, bunched and loose



* Price data not available

Squash, Summer and Winter

Some of the more common types of summer squash are yellow crookneck, yellow straightneck, white scallop, zucchini, and cocozelle. Common varieties of winter squash are Acorn, Butternut, and Hubbard.

Grade information

Summer and winter squash are subject to separate federal grades. Federal grade requirements are similar to those used at the South Water Market. Summer squash is graded U.S. No. 1 and U.S. No. 2. Winter squash is also graded U.S. No. 1 and U.S. No. 2. Some buyers simply refer to the two grades as Extra Fancy and Fancy for both summer and winter squash.

Summer Squash U.S. No 1 summer squash are fairly young, tender, well formed, and firm. They are free of any internal or external damage or discoloration.

U.S. No. 2 summer squash must meet all of the No. 1 requirements, except for age. They need not be of young maturity but should not be old or tough. The seeds must still be undeveloped and tender.

Winter Squash Most winter squash are marketed as U.S. No. 1 or "Extra Fancy." Variety, shape, and color are the major determinants of price and grade. U.S. No. 1 squash are mature, unbroken, uncracked, and free of soft rot and/or water breakdown. They should be free of damage caused by scars, dry rot, freezing, dirt, disease, and insects.

U.S. No. 2 winter squash are deformed in shape or pale or overripe in color. Because shape and color of squash vary so widely, grade requirements are not given here.

Packing, shipping, and storage

Summer and winter squash are shipped in a variety of containers. These include bushel baskets or crates holding 40 to 45 lbs., cartons or L.A. lugs, 1 1/9 bushel wire-bound crates, and half-bushel wire-bound crates. An L.A. lug is a 28-lb. carton. 15- to 20-lb. units are the preferred shipping weights.

Large winter squash are shipped loosely packed in field packs or bulk bins. Bulk bins vary in sizes from around 40 to 100 lbs.

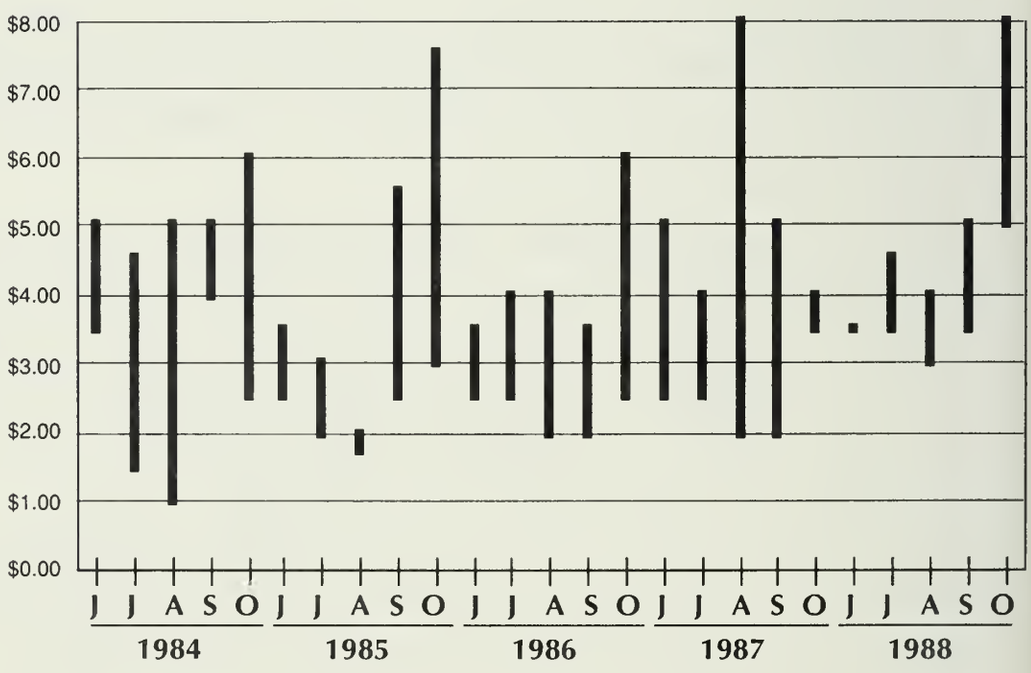
Both summer and winter squash commonly are packaged according to small, medium, and large sizes. Again, size requirements are dependent on variety. Uniformity in shape and color should be maintained when packing.

Summer squash is perishable and not normally stored for more than five days; it is best maintained at temperatures between 45° and 50°F. Winter squash can be stored; it commonly is cured for the first ten days at 80° to 85°F and then maintained at 50° to 55°F.

Squash Prices (Zucchini)

(Illinois Origin)

Ten-pound baskets, small to medium sized



Strawberries

Grade information

Three federal grades apply to strawberries: U.S. No. 1, U.S. Combination, and U.S. No. 2. Most strawberries are condition-inspected rather than quality-inspected. Bruising content is the primary condition for condition differentiation.

U.S. No. 1 is the principal commercial grade. Strawberries under this grade are firm but not overripe, with at least 75 percent of the surface showing pink or red color. They should have the caps (calyx) attached. They must be at least 3/4 inch in diameter and free of damage and disease.

U.S. No. 2 requirements are less stringent. The calyx need not be attached, and only half the surface must be red or pink in color. U.S. No. 2 strawberries must be free of dirt, decay, and disease.

U.S. Combination are a mix of No. 1 and No. 2 grade strawberries. At least 80 percent, by volume, must meet the requirements of U.S. No. 1.

Packing, shipping, and storage

Strawberries usually are shipped in trays containing twelve 1-pint containers and in 16-quart or eight 2-quart crates.

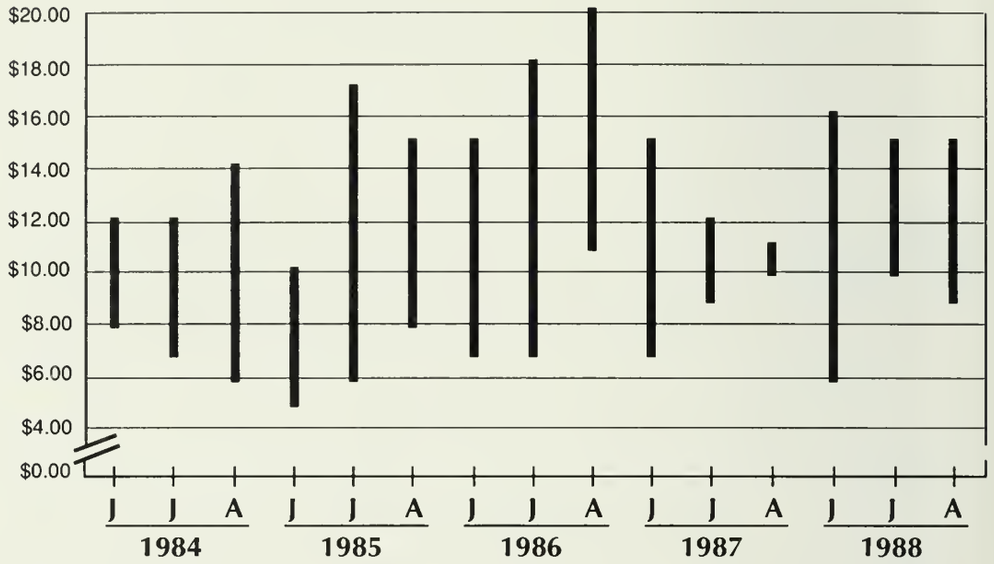
Harvest season

Strawberries are harvested from mid-May through June.

Strawberry Prices

(California Origin)

Flats of 12 pints

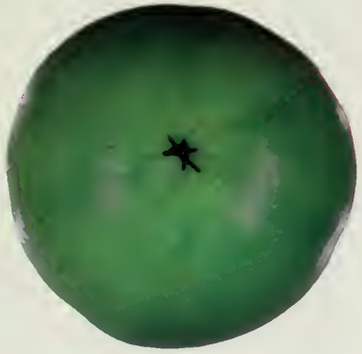


UNITED STATES STANDARDS FOR GRADES OF FRESH

U. S. Department of Agriculture
Agricultural Marketing Service
Fruit and Vegetable Division

TOMATOES

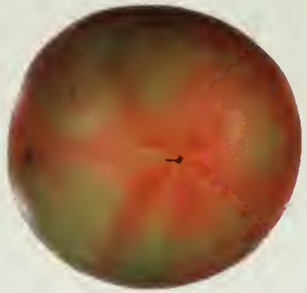
The photographs are only guides illustrating the shade and percentage of surface color specified for each of the color terms. These photographs do not necessarily depict absolute limits of minimum or maximum shades and/or percentage of color required for each item.



GREEN

BREAKERS

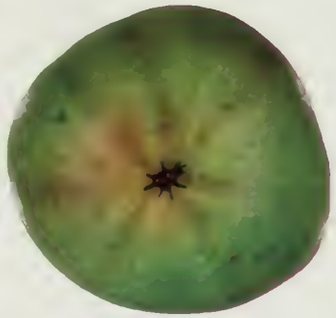
TURNING

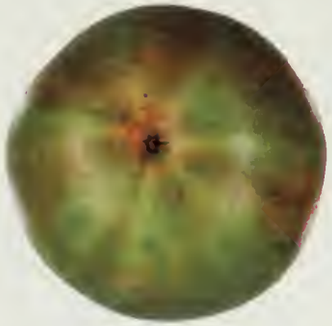


PINK

LIGHT RED

RED





(1) "**Green**" means that the surface of the tomato is completely green in color. The shade of green color may vary from light to dark.

(2) "**Breakers**" means that there is a definite break in color from green to tannish-yellow, pink or red on not more than 10 percent of the surface.

(3) "**Turning**" means that more than 10 percent but not more than 30 percent of the surface, in the aggregate, shows a definite change in color from green to tannish-yellow, pink, red, or a combination thereof.

(4) "**Pink**" means that more than 30 percent but not more than 60 percent of the surface, in the aggregate, shows pink or red color;

(5) "**Light red**" means that more than 60 percent of the surface, in the aggregate, shows pinkish-red or red: *Provided*, That not more than 90 percent of the surface is red color; and,

(6) "**Red**" means that more than 90 percent of the surface, in the aggregate, shows red color.

Color Classification

§ 51.1860 Color classification.

(a) The following terms may be used, when specified in connection with the grade statement, in describing the color as an indication of the stage of ripeness of any lot of mature tomatoes of a red fleshed variety:

(1) "**Green**" means that the surface of the tomato is completely green in color. The shade of green color may vary from light to dark;

(2) "**Breakers**" means that there is a definite break in color from green to tannish-yellow, pink or red on not more than 10 percent of the surface;

(3) "**Turning**" means that more than 10 percent but not more than 30 percent of the surface, in the aggregate, shows a definite change in color from green to tannish-yellow, pink, red, or a combination thereof;

(4) "**Pink**" means that more than 30 percent but not more than 60 percent of the surface, in the aggregate, shows pink or red color;

(5) "**Light red**" means that more than 60 percent of the surface, in the aggregate, shows pinkish-red or red: *Provided,* That not more than 90 percent of the surface is red color; and,

(6) "**Red**" means that more than 90 percent of the surface, in the aggregate, shows red color.

(b) Any lot of tomatoes which does not meet the requirements of any of the above color designations may be designated as "Mixed Color".

(c) For tolerances see § 51.1861.

(d) Tomato color standards U.S.D.A. Visual Aid TM-L-1 consists of a chart containing twelve color photographs illustrating the color classification requirements, as set forth in this section. This visual aid may be examined in the Fruit and Vegetable Division, AMS, U. S. Department of Agriculture, South Building, Washington, D. C. 20250; in any field office of the Fresh Fruit and Vegetable Inspection Service; or upon request of any authorized inspector of such Service. Duplicates of this visual aid may be purchased from The John Henry Co., Post Office Box 1410, Lansing, MI. 48904

Excerpt from U. S. Standards for Grades of Fresh Tomatoes [CFR 51.1855 - 51.1877] Effective December 1, 1973 [38 F.R. 23931] Sec. 51.1860 amended February 1, 1975 [40 F.R. 2791]

Tomatoes

Different grades apply to fresh tomatoes and greenhouse tomatoes. Illinois is not a major producer of greenhouse tomatoes. Fresh tomatoes are discussed below.

Grade information

Four federal grades apply to fresh tomatoes: U.S. No. 1, U.S. Combination, U.S. No. 2, and U.S. No. 3. At the South Water Market, only the U.S. No. 1, U.S. Combination, and U.S. No. 2 grades are used. U.S. No. 1 tomatoes are rare, and their elite quality generally commands a premium price. U.S. Combination and U.S. No. 2 are more common.

U.S. Combination and U.S. No. 2 differ in uniformity. Both grades of tomatoes should be clean, well formed, smooth, and free of bruising. Combination grade tomatoes must be consistent in appearance throughout (i.e., size and color). Combination grade tomatoes are more typical at Chicago.

Packing, shipping, and storage

Uniformity and appearance are important factors in packaging and pricing. Tomatoes should be packaged according to color and size. Although some pink varieties are grown, most tomatoes grown in Illinois are red. Tomatoes are sized as small, medium, and large. The diameter requirements for each of these three classifications are less important than maintaining uniformity and consistency in size, color, and quality throughout the cartons. The color classification chart indicates stages of maturity for red tomatoes.

Green and tannish-yellow tomatoes are shipped in cartons with volume-fill packs of various weights, while two-layer flats and 20- to 25-lb. cartons, tray-packed, are more commonly used for ripe tomatoes.

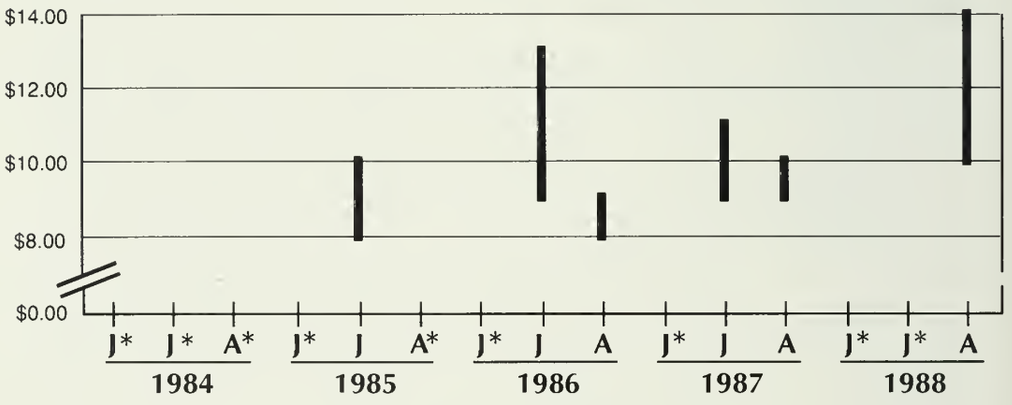
Harvest season

In Illinois the typical harvest season for tomatoes is late June, July, and August. Tomatoes should be harvested before they are red-ripe to ensure that they are not too tender or too soft to withstand commercial packaging and shipping. Normally, Illinois tomatoes are picked at the "breaker" stage, meaning just past the green stage. Tomatoes should be stored and transported at 60° to 70°F.

Tomato Prices

(Illinois Origin)

Two-layer carton, extra large size



* Price data not available

Watermelons

Grade information

Three federal grades apply to watermelon: U.S. Fancy, U.S. No. 1, and U.S. No. 2. U.S. No. 1 is the most common grade on the South Water Market. U.S. No. 1 watermelons are mature but not overripe, fairly well formed, and free of disease or decay. Grading requirements are the same for seeded and seedless varieties.

Packing, shipping, and storage

Watermelon are shipped loose in bulk packs. The size and weight of bulk packs vary considerably. The most important characteristic is that all watermelons within a bulk pack be of similar size and shape and weigh the same within 2 to 3 lbs.

Buyers purchase watermelon by the pound and individually. Price per pound is approximately equal under both methods.

For optimum flavor and color, watermelons should be marketed immediately. If necessary, however, watermelons can be stored up to 3 weeks at 50°F. Any excessive variation from this temperature will reduce flavor and color. Melons are susceptible to damage from overchilling.

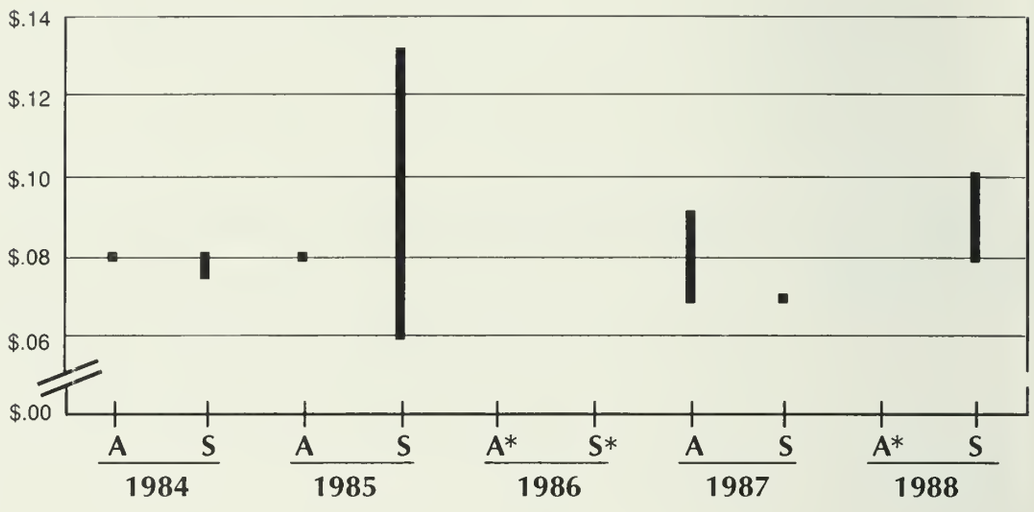
Harvest season

In Illinois, the harvest season for watermelons peaks in August and early September.

Watermelon Prices

(Illinois Origin)

Per pound, loose



* Price data not available

Part II

Markets, Buyers, and Distributors

Distributors

Firms listed in this section handle products that can be grown in Illinois; they are all potential marketing outlets. Firms designated with an asterisk are known to have handled produce grown in Illinois.

South Water Market, Chicago

Anton-Argires Bros. and Co.*
27-29 South Water Market
Chicago, IL 60608
(312) 226-7805 or (312) 666-0100
Handles full line of fruits and vegetables, including greens, strawberries, parsley, and cauliflower. Willing to talk to growers and answer questions.

Berkowitz, A., Co.
43 South Water Market
Chicago, IL 60608
(312) 243-0808 or (312) 243-0814
Handles a variety of fruits and vegetables. Specializes in tomatoes and peppers. Willing to talk to growers and answer questions.

Carioto-Larsen, Inc.*
133 South Water Market
Chicago, IL 60608
(312) 666-0800 or (312) 226-5564
Handles a variety of fruits and vegetables, including cantaloupe, onions, broccoli, tomatoes, and cucumbers.

Caruso, J., Produce, Inc.*
14 South Water Market
Chicago, IL 60608
(312) 243-8822 or (312) 243-9855
Primarily handles Illinois-grown cantaloupe. Willing to talk to growers and answer questions.

Chicago Fruit and Vegetable Auction and Sales Co.
63 South Water Market
Chicago, IL 60608
(312) 243-1405
Handles a variety of fruits and vegetables, including potatoes, onions, and tomatoes.

City Wide Produce Distributors, Inc.*
36 South Water Market
Chicago, IL 60608
(312) 666-6190
Primarily handles potatoes and onions.

Durante and Termini, Inc.*
39-41 South Water Market
Chicago, IL 60608
(312) 226-6943 or (312) 998-0429
Handles a variety of fruits and vegetables, including cucumbers, peppers, tomatoes, apples, and cantaloupe.

El Rancho Produce*
63 South Water Market
Chicago, IL 60608
(312) 226-6100 or (312) 767-4492
Handles sweet and hot peppers and cabbage.

Hoversen & Sons*
62 South Water Market
Chicago, IL 60608
(312) 226-7609 or (312) 631-1721
Handles cucumbers, bell peppers, and tomatoes.

Keller, Jack, Co., Inc.*
61 South Water Market
Chicago, IL 60608
(312) 243-4019 or (312) 243-4081 or (312) 243-4076
Handles a variety of fruits and vegetables, including tomatoes, potatoes, and onions.

La Hacienda Brands, Inc.*
116 South Water Market
Chicago, IL 60608
(312) 243-2755 or (312) 243-2756
Carries Illinois-grown zucchini, cabbage, and bell peppers.

La Mantia Bros. Arrigo Company*
28-34 South Water Market
Chicago, IL 60608
(312) 226-8100
Handles a variety of fruits and vegetables, including cauliflower, apples, onions, cantaloupe, green beans, strawberries, and potatoes.

La Preferida, Inc.*
83-95 South Water Market
Chicago, IL 60608
(312) 666-5872
Handles peppers (fingerhot, jalapeno, fingerbaskets) and cucumbers.

Lurie Bros.*
84 South Water Market
Chicago, IL 60608
(312) 226-1428 or (312) 666-2191
Handles large quantities of potatoes and onions.

Mandolini Co., Inc.*
44 South Water Market
Chicago, IL 60608
(312) 226-1690 or (312) 226-1698
Specializes in apples. Also handles peppers and honeydew melon.

Merkel, Austin J., Co., Inc.*
23-25 South Water Market
Chicago, IL 60608
(312) 243-3365 or (312) 243-3378
Handles a variety of fruits and vegetables, including greens, cauliflower, peppers, tomatoes, apples, strawberries, and cabbage.

Mushroom Growers Assn. Sales Co *
18 South Water Market
Chicago, IL 60608
(312) 421-7088
Specializes in peppers, cucumbers, squash, melons, and mushrooms.

Navilio, Michael J., Inc.*
40 South Water Market
Chicago, IL 60608
(312) 243-7515
Handles a variety of fruits and vegetables, including tomatoes, peppers, cucumbers, sweet corn, cabbage, and cantaloupe.

Olympic Wholesale Produce and Foods, Inc.*
31 South Water Market
Chicago, IL 60608
(312) 421-2889 or (312) 421-3239
Handles a variety of fruits and vegetables. Willing to meet with growers and answer questions.

Pusateri, Leo, and Sons *
80 South Water Market
Chicago, IL 60608
(312) 829-6888 or (312) 833-7456
Handles a variety of fruits and vegetables, including red and green cabbage, cucumbers, and honeydew. Willing to meet with growers and answer questions.

S & M Produce, Inc.*
42 South Water Market
Chicago, IL 60608
(312) 829-0155
Specializes in novelty fruits and vegetables and herbs. Especially interested in yellow baby cabbage, sugar snap peas, and Illinois dutch peppers. Willing to meet with growers of these products and other novelty items.

Spanola, J., & Sons, Inc.*
20 South Water Market
Chicago, IL 60608
(312) 226-3395 or (312) 226-3396
Handles a variety of fruits and vegetables, including watermelon.

Strube Celery and Vegetables Co.*
68 South Water Market
Chicago, IL 60608
(312) 243-2233 or (312) 666-0157
Handles a variety of fruits and vegetables, including cabbage, sweet corn, apples, cantaloupe, tomatoes, peppers, cucumbers, green beans, parsley, and horseradish root. Willing to meet with growers and answer questions.

Tuchten-Altman Company
35-37 South Water Market
Chicago, IL 60608
(312) 829-7700
Handles apples, cantaloupe, and melons.

Vitro and Pecoraro Co., Inc.*
46 South Water Market
Chicago, IL 60608
(312) 243-1366 or (312) 243-1367 or (312) 226-7520
Specializes in peppers, cucumbers, cabbage, tomatoes, mushrooms, and zucchini.

Wainer Fruit Co.*
19 South Water Market
Chicago, IL 60608
(312) 829-7110
Specializes in tomatoes.

Other Illinois Markets Outside the South Water Market

John's Northwest Produce*
939 South Evergreen
Arlington Heights, IL 60005
(312) 392-5577
Handles a variety of fruits and vegetables, including tomatoes, potatoes, cabbage, and onions.

Jones, J.M., Co., Inc.*
P.O. Box 8
Champaign, IL 61820
(217) 384-2800 or (217) 384-2717
Handles a variety of fruits and vegetables, including potatoes, apples, watermelons, and onions.

Certified Grocers Midwest, Inc.
Central Division:
4800 South Central Avenue
Produce Division:
9200 West 67th Street
Chicago, IL 60638
(312) 579-2160
Handles a variety of fruits and vegetables, including potatoes, apples, tomatoes, cabbage, cauliflower, onions, watermelons, cantaloupes, and cucumbers.

Evergreen International Produce*
1105 West Fulton Street
Chicago, IL 60607
(312) 421-6434
Handles a general line of vegetables and oriental vegetables.

Green Garden Produce Co., Inc.*
942 West Randolph Street
Chicago, IL 60607
(312) 733-5054
Handles a variety of fruits and vegetables, including potatoes, tomatoes, and cabbage.

Kaiser, Harvey, Inc.*
666 Dundee Road, Suite 404
Northbrook, IL 60062
(312) 498-1016
Handles cabbage, onions, cucumbers, and peppers. Willing to meet with growers and answer questions.

Karos, D.J., Co.*
832 West Randolph Street
Chicago, IL 60607
(312) 829-9788 or (312) 226-8313
Handles a variety of fruits and vegetables, including apples.

Kutsulis, Tom, and Company*
9349 South Western Avenue
Chicago, IL 60620
(312) 239-2648 or (312) 238-2772
Handles a variety of fruits and vegetables. Specializes in watermelon. Willing to meet with growers and answer questions.

Lange, Tom, Co., Inc.*
910 West Randolph Street
Chicago, IL 60607
(312) 733-6900
Handles a general line of fruits and vegetables, including potatoes.

Steinberg Bros., Co.
6160 North Cicero Avenue
Chicago, IL 60646
(312) 283-8841 or (312) 283-8845
Handles tomatoes, cantaloupe, and potatoes.

Watermelon Depot
719 West O'Brian
Chicago, IL 60607
(312) 733-2222
Specializes in watermelon.

Montelione, Joseph, and Sons, Inc.*
1633-37 Lowe Avenue
Chicago Heights, IL 60411
(312) 754-3608 or (312) 755-3593
Handles a variety of fruits and vegetables, including potatoes, tomatoes, and watermelon.

Draper Produce Co.*
Front Street
Cobden, IL 62920
(618) 893-2417
Handles a variety of fruits and vegetables, including tomatoes, cabbage, apples, cucumbers, peppers, and squash.

Hoerr, Chris, and Son Co.*
600 West Camp Street
East Peoria, IL 61611
(309) 694-4211 or (309) 694-6821
Handles a variety of fruits and vegetables. Willing to meet with growers and answer questions.

Schmidt Bros. Produce Co.
1126 West Washington Street
East Peoria, IL 61611
(309) 694-3181 or (309) 694-1942
Specializes in berries, potatoes, tomatoes, and apples. Also handles watermelons, cabbage, cantaloupe, and greens.

Freeport Wholesale Produce*
P.O. Box 873
107 East Spring Street
Freeport, IL 61032
(815) 235-6111 or (815) 235-4279
Handles a variety of fruits and vegetables.

Rogers Bros., Inc.*
470 East Broods Street
Galesburg, IL 61401
(309) 342-2127 or (309) 342-5600
Handles potatoes, onions, cabbage, tomatoes, and watermelons.

P.F.D. Supply Corp.*
P.O. Box W
1800 Adams Street
Granite City, IL 62040
(618) 451-5600
Handles a variety of fruits and vegetables.

Daniell Produce Co., Inc.*
209 North 15th Street
Mattoon, IL 61938
(217) 234-2218 or (217) 234-6042 or (217) 234-6057
Handles a variety of fruits and vegetables. Willing to meet with growers and answer questions.

Eagle Food Centers, LP.
P.O. Box 67
Route 67 & Knoxville Road
Rock Island, IL 61201
(309) 787-7840
Handles a variety of fruits and vegetables, including potatoes, apples, cabbage, onions, cantaloupe, watermelon, and strawberries.

Cusumano and Sons*
410 South 10th Street
Mt. Vernon, IL 62864
(618) 244-0198
Handles a variety of fruits and vegetables.

Dierks Foods, Inc.
P.O. Box 2579
1616 Elmwood Road
Rockford, IL 61132
(815) 877-7031
Handles a variety of fruits and vegetables, including potatoes, tomatoes, cabbage, onions, strawberries, apples, and cantaloupe.

Humphrey's Market*
1821 South 15th Street
Springfield, IL 62703
(217) 544-7445
Handles a variety of fruits and vegetables. Specializes in tomatoes and apples.

Lange, Tom, Co., Inc.*
P.O. Box 19261
5231 South 6th Street Road
Springfield, IL 62794
(217) 786-3800
Handles a variety of fruits and vegetables, including potatoes, apples, tomatoes, cabbage, cantaloupe, watermelons, cauliflower, and strawberries.

Springfield Produce, Inc.*
P.O. Box 5023
320 South 10th Street
Springfield, IL 62705
(217) 544-1715
Handles potatoes, apples, onions, tomatoes, watermelon, and cantaloupe.

Illinois Fruit and Produce Corp.
P.O. Drawer B
1 Quality Lane
Streator, IL 61364
(815) 673-3311
Handles a variety of fruits and vegetables, including potatoes, onions, cabbage, and tomatoes.

Dohme Produce Co., Inc.
500 South Glover
Urbana, IL 61801
P.O. Box 162
(217) 367-8308
Handles a variety of fruits and vegetables.

Mill St. Produce*
P.O. Box 424
313 Mill Street
Utica, IL 61373
(815) 667-5224
Handles a variety of fruits and vegetables, including cantaloupe, cucumbers, watermelon, peppers, and tomatoes.

St. Louis and Surrounding Area

Adolph and Ceresia Produce Co., Inc.*
28-30 Produce Row
St. Louis, MO 63102
(314) 421-3527
Carries a variety of fruits and vegetables. Specializes in lettuce and potatoes.

Cantanzaro Produce Co., Inc.
2 Produce Row, Rear
St. Louis, MO 63102
(314) 621-7707
Handles lettuce, tomatoes, potatoes, and onions.

Consolidated Brokerage Co.
2306 North Broadway
St. Louis, MO 63102
(314) 621-5220
Handles a variety of fruits and vegetables.

Franklin Produce Co.*
3-5 Produce Row
St. Louis, MO 63102
(314) 421-4580 or (314) 421-5483 or (314) 421-0488
Handles a variety of fruits and vegetables, including lettuce, apples, cantaloupe, potatoes, onions, and cabbage.

Friedmeyer, N.E.-Sellmeyer Distributing Co.*
36-42 Produce Row
St. Louis, MO 63102
(314) 241-1636 or (314) 241-1637 or (314) 231-5455
Handles a variety of fruits and vegetables, including tomatoes, potatoes, apples, and greens.

G & G Brokerage Co.*
410 Mansion House Center
St. Louis, MO 63102
(314) 231-9322
Carries a variety of fruits and vegetables, including lettuce, potatoes, and onions.

Garden Pride Brokers*
64 Produce Row
St. Louis, MO 63102
(314) 241-8060 or (314) 991-2566 or (314) 991-2570
Handles a general line of fruits and vegetables.

Goldman Fruit and Produce Co., Inc.*
14 Produce Row
St. Louis, MO 63102
(314) 231-2406
Handles mushrooms and broccoli.

Heimos, George A., Produce Co., Inc.*
32-34 Produce Row
St. Louis, MO 63102
(314) 231-3787 or (314) 231-3788 or (314) 231-3789 or (314) 231-3790
Specializes in cabbage, greens, and lettuce.

Independent Fruit and Produce Co.*
64-70 Produce Row
St. Louis, MO 63102
(314) 241-4271 or (314) 241-4273
Handles watermelon, cucumbers, green beans, cabbage, cauliflower, apples, peppers, and strawberries.

Johnson, J., Fruit and Produce Co.*
56-58 Produce Row
St. Louis, MO 63102
(314) 231-0415
Handles a variety of fruits and vegetables, including potatoes, cabbage, onions, tomatoes, and apples.

Lange, Tom, Co., Inc.*
97 Produce Row
St. Louis, MO 63102
(314) 621-7953
Handles a variety of fruits and vegetables.

Lombardo's Food Service, Inc.*
79-95 Produce Row
St. Louis, MO 63102
(314) 231-1962
Carries potatoes, lettuce, tomatoes, onions, and cabbage.

M.J.M. Produce Exchange*
13 Produce Row
St. Louis, MO 63102
(314) 241-6837
Carries a variety of vegetables, including potatoes and onions.

Midwest Food Marketing, Inc.*
P.O. Box 464
1903 Gatemont
Chesterfield, MO 63006
(314) 394-1356
Carries a general line of fruits and vegetables.

Moon, John, Produce Co.*
43-49 Produce Row
St. Louis, MO 63102
(314) 231-5928 or (314) 231-9943
Handles tomatoes, cabbage, and apples.

Mr. Service*
9910 Page
St. Louis, MO 63132
(314) 426-1300 or (618) 397-0023
Handles a variety of fruits and vegetables, including potatoes, onions, cabbage, and lettuce.

National Supermarkets, Inc.*
P.O. Box 7123
8525 Page Boulevard
Vinita Park, IL 63177
(314) 731-5511
Handles a variety of fruits and vegetables.

New Market Produce Co.*
24-26 Produce Row
St. Louis, MO 63102
(314) 231-2607 or (314) 231-5215
Handles a variety of fruits and vegetables, including green beans, peppers, cucumbers, tomatoes, apples, and strawberries.

Ole Tyme Produce, Inc.*
9294 Produce Row
St. Louis, MO 63102
(314) 436-5010
Handles a variety of fruits and vegetables.

Overland Thrift Markets, Inc.*
8711 St. Charles Rock Road
St. John, MO 63114
(314) 426-2562
Carries a variety of fruits and vegetables.

Sam's Produce, Inc.*
10-12 Produce Row
St. Louis, MO 63102
(314) 241-3005
Handles a variety of fruits and vegetables.

Sherman Produce Co., Inc.*
41-44-46 Produce Row
St. Louis, MO 63102
(314) 231-2896 or (314) 231-0772
Handles a variety of fruits and vegetables, including green beans, tomatoes, strawberries, peppers, broccoli, cantaloupe, cucumbers, lettuce, blueberries, and green onions.

United Fruit and Produce, Inc.*
51-77 Produce Row
St. Louis, MO 63102
(314) 621-9440
Carries onions, potatoes, melons, peppers, cucumbers, and a variety of fruits.

Warehouse Foods, Inc.*
1665 Lotsie Blvd.
St. Louis, MO 63141
(314) 427-2525
Carries a variety of fruits and vegetables.

Food Processors in Illinois and Southern Wisconsin

The following list has largely been adapted from the 1989 membership directory of the Midwest Food Processors Association.

Aunt Nellie's Farm Kitchen, Inc.
P.O. Box 67
Clyman, WI 53016
(414) 696-3331
Butter beans, beets, red cabbage, carrots, corn, onions, peas, potatoes, cherries

Bond Food Products, Inc.
P.O. Box 18
Oconto, WI 54153
(414) 834-4433
Pickling cucumbers

Del Monte Foods USA
Box 98
Arlington, WI 53911
(608) 635-4301
Corn, peas, cabbage

Del Monte Foods USA
Box 747
DeKalb, IL 60115
(815) 758-3431
Golden corn, white corn, peas, salad beans

Del Monte Foods USA
P.O. Box 267
Markesan, WI 53946
(414) 398-2331
Green beans, wax beans, cabbage

Del Monte Foods USA
347 North 43rd Road
Mendota, IL 61342
(815) 539-9361
Lima beans, golden corn, peas

Fremont Co.
P.O. Box 272
Black Creek, WI 54106
(414) 984-3304
Cabbage

Friday Canning Corp.
Division Office
P.O. Box 68
Fall River, WI 53932
Raw Products Procurement:
(414) 484-3321
Butter beans, green beans, wax beans, garbanzo beans, kidney beans, corn, peas, carrots, potatoes

Green Bay Food Co.
P.O. Box 19057
Green Bay, WI 54307
(414) 497-7131
Pickling cucumbers

H.J. Heinz Co.
1357 Isett Avenue
Muscatine, IA 52761
(319) 263-0893
Tomatoes, pickling cucumbers

KLM Foods, Inc.
P.O. Box 469
Pulaski, WI 64162
(414) 822-3151
Green beans, wax beans, carrots, corn, peas, potatoes, cabbage

Lakeside Packing Co.
P.O. Box B
Belgium, WI 53004
(414) 285-3299
Green beans, wax beans, beets, potatoes

Lakeside Packing Co.
P.O. Box 1327
Manitowoc, WI 54221
(414) 684-3356
Green beans, wax beans, beets, broccoli, carrots, cauliflower, potatoes

Lakeside Packing Co.
507 Allen Street
Random Lake, WI 53705
(414) 994-2117
Corn, peas, carrots

Larsen Co.
P.O. Box 19027
Green Bay, WI 54307
Raw Product Procurement:
(414) 435-5301 ext. 249
Green beans, lima beans, corn, peas, carrots, spinach

Lodi Canning Co., Inc.
P.O. Box 303
Lodi, WI 53555
(608) 592-4236
Corn, peas

Pillsbury Co./Green Giant
1322 North Spring Street
Beaver Dam, WI 53916
(414) 887-1771
Corn, green beans

Pillsbury Co./Green Giant
915 East Pleasant Street
Belvidere, IL 61008
(815) 547-5311
Mixed vegetables

Pillsbury Co./Green Giant
215 West Washington Street
Hoopeston, IL 60942
(217) 283-7771
Dry beans, golden corn, white corn, blackeye peas

Pillsbury Co./Green Giant
500 South Clark Street
Mayville, WI 53050
(414) 387-2500
Golden corn, peas

Pillsbury Co./Green Giant
Ripon, WI 54971
(414) 748-8516
Golden corn, peas

Princeville Canning Co.
606 Tremont Avenue
Princeville, IL 61559
(309) 385-4301
Asparagus, salad beans, potatoes, pumpkin

Reedsburg Foods Corp.
P.O. Box 270
Reedsburg, WI 53959
Raw Products Procurement:
(608) 524-2346
Corn, peas

Seneca Foods Corp.
418 East Conde Street
Janesville, WI 53546
(608) 752-7891
Green beans, wax beans, dry beans, salad beans, lima beans, peas, corn, carrots, cabbage, asparagus, beets

Seymour Canning Co.
P.O. Box 5
Seymour, WI 54165
(414) 833-2371
Green beans, wax beans, beets, carrots, corn, peas, potatoes, cabbage

Stokely USA, Inc.
P.O. Box 1457
Appleton, WI 54913
(414) 734-5737
Beets, peas, potatoes

Stokely USA, Inc.
Cobb, WI 53526
(608) 623-2323
Garbanzo beans, kidney beans, corn, peas

Stokely USA, Inc.
P.O. Box 841
Green Bay, WI 54305
(414) 435-3793
Beans, corn, peas

Stokely USA, Inc.
P.O. Box 250
Hoopeston, IL 60942
(217) 283-5141
Asparagus, lima beans, golden corn

Stokely USA, Inc.
1015 Industrial Drive
Jefferson, WI 53549
(414) 674-3201
Lima beans, green beans, broccoli, Brussel sprouts, carrots, cauliflower, corn, peas

Stokely USA, Inc.
W8070 Kent Road
Pickett, WI 54964
(414) 589-4411
Corn, peas

Stokely USA, Inc.
Poynette, WI 53955
(608) 635-4396
Corn, peas, cabbage

Stokely USA, Inc.
P.O. Box 65
Sun Prairie, WI 53590
(608) 837-5177
Lima beans, corn, peas, carrots, onions

Stokely USA, Inc.
P.O. Box 307
Waunakee, WI 53597
(608) 849-4131
Beans, carrots, peas, corn, potatoes

Appendix A

Common Packaging Requirements & Container Net Weights

A wide variety of packages, often varying only slightly in dimensions, is used to ship fresh fruits and vegetables. Probably in the future there will be fewer and more standardized packages to meet the requirements of palletized and other unitized shipping. A comprehensive list of current packages would be bulky and impractical, and would consist of many packages not often used. The following list includes the most common packages used for shipment and their net weight, so far as known. Where two net weights are given, this indicates the general range. It is characteristic of fresh produce that the weight varies among packages of the same volume, and even in the same package over time. Consequently, weights can only be approximate.

Sources of data are the Market News Service of the Fruit & Vegetable Division, Consumer and Marketing Service, U.S. Department of Agriculture; California Department of Agriculture; Florida Department of Agriculture; Package Research Laboratory; Fruit and Vegetable Facts and Pointers series of the United Fresh Fruit and Vegetable Association; and the Department of Horticulture at the University of Illinois. A list of abbreviations is given at the end of the table.

Commodity	Containers	Approximate net weight (lbs.)
Anise	Sturdee crt and wbd	40-50
	Crt 24	35-40
Apples	Ctn tray pk or cell pk	40-45
	Ctn bulk	36-42
Asparagus	Pyramid crt	32
	Ctn 16 1½ lb-pkgs	24
	2-lyr ctn	28-30
	1-lyr flat	14-18
Beans, snap	Wbd crt	28-30
	Ctn	28-30
	Bu hmpr	28-30
Beets, bchd	Wbd crt 24 bchs	36-40
	Ctn 12 bchs (mostly used)	18-20
Beets, topped	Film or mesh bag	25-50
Berries (misc.) Raspberries Blackberries	12 half-pts on tray	5½-7½
Blueberries	12-pt tray (half-pint tray on early picks)	11-12
Broccoli	Ctn or crt 14 bchs	20-23
Brussel sprouts	Flat 12 10-oz cups	7½-8
	Ctn	25
Cabbage	Crt or ctn	50-55
	Bag, mesh or paper	50-60
	Wbd crt	50
Cantaloupes	Ctn 9, 12, 18, 23	38-41
Carrots, bchd	Ctn 2-doz bchs	23-27
Carrots, tipped	48 1-lb film bags in ctn or wbd crt	50
	Bulk in mesh film lined bag	50

Commodity	Containers	Approximate net weight (lbs.)
Cauliflower	Ctn 12-16 trimmed, wrpd	18-24
	Catskill or LI wbd crt	45-50
Celeriac	24 1-lb bags in master	24
	L A lug	30
	Sack	50
Cherries	Calex lug (mostly used)	18-20
	Campbell lug	15-16
	Lug, loose pack	12-14
Chinese cabbage	Wbd crt	50
Corn, sweet	Wbd crt	40-60
	Mesh or multiwall bag	45-50
Cucumbers	1 1/9 bu wbd crt	55
	Bu bsk or ctn	47-55
	L A lug	28-32
	Ctn 24s	26-30
Cucumbers, grnhouse	Ctn	8-10
Eggplant	Bu bskt or crt	30-34
	1 1/9 bu wbd crt	35
	L A lug 18-24	20-22
Endive-Escarole	Wbd crt and ctn	30-36
	1 1/9 bu wbd crt	25-30
Garlic	Crt and ctn	30
	L A lug	20-22
Grapes, table	Lug or ctn	24-28
	Lug 16, 22, 24 wrpd bchs	22
Greens (all types)	Bu bskt or crt (loose, 24 bunches)	20-25
Honeydews	Ctn 4, 5, 6, 8, 9	20-26

Commodity	Containers	Approximate net weight (lbs.)
Leeks	4/5 bu wbd crt	25-30
Lettuce, Boston	Eastern crt 1 1/9 bu wbd (mostly 24)	18-20
Lettuce, Romaine	1 1/9 bu wbd crt Ctn 2-doz	30 35
Lettuce, looseleaf	Var contrs 2-doz	20-25
Lettuce, Bibb	12 qt bskt	5
Lettuce, greenhouse	Bskt (2 sizes)	5-10
Mushrooms	Flat 10 12-oz. cups Ctn 8 1-lb bskts Ctn 12 8-oz contrs 3-lb bskt	4 1/2-5 10 20-21 3
Okra	Bu bskt or crt L A lug 5/9 bu wbd flat	30 18 18
Onions, dry	Sack Ctn Film bags 3-, 5-, 10-lb in master contr	50 48-50 *
Onions, green	Ctns 4-doz bchs Wbd crt 8-doz bchs	15-18 35-40
Parsley	Ctn 5-doz bchs 1 1/9 bu wbd crt 5-doz Also 30 bchs	21 21 12
Parsley root	12 bchs	18
Parsnips	Sack, film or mesh L A lug Bu bskt Film bag	50 30 50 25

Commodity	Containers	Approximate net weight (lbs.)
Peaches	L A lug 2-lyr	22-29
	3/4 bu ctn, wbd crt or bskt	35-42
	Sanger lug 2-lyr	19-22
Pears	Western box, lug, and tight-fill ctn	45-48
	Ctn tight-fill	36
	L A lug or 2-lyr ctn	21-26
Peas, green	Bu bskt or hmpr	28-30
	Wbd bu crt	28-30
Peppers, sweet	Ctn	28-34
	1 1/9 bu crt	28-33
	Bu bskt or crt	28-30
Peppers, chili	L A lug or ctn, loose pk	16-25
Potatoes	Sack	100
	Sack or ctn	50
	5 10-lb sks baled	50
	10 5-lb sks baled	50
Radishes, topped	Ctn pr 30 6-oz bags	11 1/4-11 1/2
	Film bag, bulk	25
	Ctn pr 14 1-lb bags	11 1/4-11 1/2
	Film bag, bulk	40
Radishes, bchd	Ctn or crt 2-4 doz bchs	30-40
Rhubarb	Case 10 5-lb ctns	50
	Ctn	20
Rutabagas	Sack	50
Spinach	Bu bskt or crt	18-25
	Ctn 2-doz bchs	20-22
	Wbd crt	20-22
Squash, small	Bu bskt or crt	40-45
	1 1/9 bu wbd crt	44
	Half-bu wbd crt	21
	Ctn or L A lug	24

Commodity	Containers	Approximate net weight (lbs.)
Squash, large	Bulk bins, var sizes	900-2,000
Strawberries	12 pt cups in tray	11-12
Sweet potatoes	Ctn	40
	Bu bskt or crt	50
Tomatoes	L A lug	30-34
	Flats, ctns, 2-lyr	20-23
	Lugs and ctns, 3-lyr	30-33
	8-qt bskt	9-11
	12-qt bskt	18-20
Tomatoes, cherry	12 bskt tray	16-18
Topped root vegetables	Sack or bu bskt	50
	Film or mesh bag	25
	L A lug	30
	1-lb bags, 24 per master	24
Turnips, topped	Sack	50
	12 1-lb mesh or film bag	24
	L A lug	30
Turnips, bchd	Crt	29
Watercress	Ctn 2-doz bchs	*
	Ctn 1-doz bchs	*
Watermelons	Var bulk bins	800-2,000
	Ctns 3,4,5	55-80

Abbreviations

* ..... weight not available	lyr ..... layer
bchd ..... bunched	oz ..... ounce
bskt ..... basket	pk ..... pack
bu ..... bushel	pkg ..... package
crt ..... crate	pt ..... pint
ctn ..... carton	sk ..... sack
contr ..... container	std ..... standard
hmpr ..... hamper	var ..... various
L A ..... Los Angeles	wbd ..... wirebound
lb ..... pound	wrpd ..... wrapped

Further explanations can be found in the glossary. For common containers and sizes used in direct marketing of fruits and vegetables, see *Horticulture Facts,* HM-3-79, which is listed in Appendix B: Information Sources.

Appendix B

Information Sources

Directory of Illinois Fresh Fruit and Vegetable Markets. Lists roadside markets, u-pick farms, and community farmers' markets in Illinois. Some roadside markets buy products from local growers.

Contact:
Illinois Department of Agriculture
P.O. Box 19281
Springfield, IL 62794-9281
(217) 782-6675.

You may call or write for the prices of these publications:

HM-1-79 *Pick-your-own marketing of fruits and vegetables*
HM-2-79 *Liability and insurance for u-pick operations*
HM-3-79 *Net weights and processed yields of fruits and vegetables in common retail units*
HM-4-80 *Establishing a community farmers' market*
HM-5-82 *Yields of commercial food crops in Illinois*
HM-6-82 *Estimating the trade area and potential sales for a pick-your-own strawberry farm*

Illinois Vegetable Farmer's Letter (quarterly newsletter)

Contact:
Department of Horticulture
University of Illinois
1201 South Dorner Drive
Urbana, IL 61801
(217) 333-0351

Annual Proceedings of the Illinois Fruit, Vegetable and Irrigation Convention. Includes information on the production and marketing of specialty crops.

Contact:
Department of Horticulture
University of Illinois
1201 South Dormer Drive
Urbana, IL 61801
(217) 333-0351

Situation reports on individual commodities are available from the USDA's Economic Research Service. The *Fruit and Tree Nuts: Situation and Outlook Report* is published 3 times per year; the *Vegetables and Specialties: Situation and Outlook Report* is published semi-annually. These publications may also be accessed electronically through the USDA's EDI system. For details, call (202) 447-5505.

Contact:
Commodity Economics Division
Economic Research Service, USDA
P.O. Box 1608
Rockville, MD 20850
(800) 999-6779

The USDA's Market News Service provides daily, weekly, monthly, and annual price reports from terminal markets, including a range of prices for major grades of produce. The *Chicago Fruit and Vegetable Report* costs $144 per year ordered daily; $72 per year ordered Mondays only. Call (312) 353-0111.

For Chicago prices, contact:
USDA Market News Service
Fruit and Vegetable Division
536 South Clark, Room 942
Chicago, IL 60605

For St. Louis prices, contact:
USDA Market News Service
Fruit and Vegetable Division
208 North Broadway, Room 1010
St. Louis, MO 63102

The Packer. This weekly newspaper for the fruit and vegetable industry gives weekly price estimates.

Contact:
The Packer
P.O. Box 2939
Shawnee Mission, KS 66201

Pro-Net. A computer-accessed listing of prices from terminal markets around the United States.

Contact:
Pro-Net
P.O. Box 2939
Shawnee Mission, KS 66201
(800) 255-5113

Information about grade standards for fresh fruits and vegetables is available from:

USDA Food Safety and Quality Service
Fresh Products Branch
Fruit and Vegetable Quality Division
Washington, DC 20250

Various publications, training sessions, and consulting services on marketing of fresh fruits and vegetables are available through the United Fresh Fruit and Vegetable Association. The *Fruit and Vegetable Facts and Pointers* series is especially useful for producers.

Contact:
United Fresh Fruit and Vegetable Association
North Washington at Madison
Alexandria, VA 22314
(703) 836-3410

Point-of-purchase information is available through the Illinois Vegetable Growers Association.

Contact:
Illinois Specialty Growers Association
1701 Towanda Avenue
Bloomington, IL 61701
(309) 557-2107

National Wholesale Herb Market News Report. Quotes prices for wholesale herb sales from 18 major cities to retailers in their area. Costs $72 per year; Wednesdays only.

Contact:
USDA Market News Service
Fruit and Vegetable Division
536 South Clark, Room 942
Chicago, IL 60605.

Fruit and Vegetable Resources Available from the Office of Agricultural Communications and Education is a brochure that lists publications of interest to fruit and vegetable growers.

Contact:
Office of Agricultural Communications and Education
69B Mumford Hall
1301 West Gregory Drive
Urbana, IL 61801
(217) 333-2007

Glossary of Terms

A

AUCTION
Central location where produce is brought to be sold to the highest bidder. Auctions still operate in Chicago, Philadelphia, Detroit, Pittsburgh, and Vineland, N.J.

B

BIRD DOG
On-the-ground inspector hired by a broker, buyer, or buying organization to inspect produce in the field and report its quality and other factors.

BOOKING
A practice of placing advance orders to reserve specific quantities to meet anticipated requirements—a common practice in seasonal promotions and items dealing with seasonal packing patterns.

BRAND
Label or trademark to identify a shipper's product. The Trademark Act of 1946 defines a trademark as "any word, name, symbol or device or any combination thereof adopted and used by a manufacturer or merchant to identify his goods and distinguish them from those manufactured or sold by others."

BREAKER
Tomato just beginning to turn color from a solid green. Most tomatoes are harvested at this stage.

BROKER

As defined under the **Perishable Agricultural Commodities Act** (PACA), a broker is any person engaged in the business of negotiating sales and purchases of produce in commerce for or on behalf of the vendor or the purchaser. In negotiating a contract, a broker usually acts as an agent of the buyer or the seller, but not as an agent of both parties. Frequently, carlot brokers never see the produce they are quoting for sale or negotiating for purchase by the buyer. They relay offers and counteroffers between the buyer and seller until a contract is effected.

Generally, the seller of the produce invoices the buyer; however, when there is a specific agreement between the broker and his principal, the seller invoices the broker who, in turn, invoices the buyer, collects, and remits to the seller.

Under other types of agreements, the seller ships the produce to the broker at destination, who distributes to pool buyers, invoices the buyers, collects, and remits to the seller.

Sometimes the broker is authorized by the seller to act much like a commission merchant and is given blanket authority to dispose of the produce for the seller's account, either by negotiation of sales to buyers not known to the seller or by placing the produce for sale on consignment with receivers in the terminal markets.

BROKER (Buying or On-the-ground)

Typically, this kind of broker acts as the buyer's representative in negotiating purchase at shipping points, terminal markets, or intermediate points. A typical operation is to negotiate a purchase with the buyer's instruction and authorization. Sometimes the broker negotiates the purchases without seeing the produce. Sometimes the broker selects the merchandise after appraising the quality of the produce being offered for sale on the market (**PACA** definition).

Generally a purchase is made in the buyer's name, and the seller invoices the buyer directly. On the other hand, acting on the buyer's authority, the broker may negotiate purchase in his

or her own name, pay the seller for the produce, make arrangements for its loading and shipping, and bill the buyer directly for the cost price plus the brokerage fee and the costs of any agreed-upon accessorial service charges, such as ice or loading.

BULK BIN
Shipping container that holds a large amount of product. For example, it may carry as much as 2,000 lbs. of watermelons or citrus. These bins also can be used as display units in supermarkets.

BUYER (On-the-ground)
On-site person hired by a retail or wholesale organization to inspect and buy products for that particular organization.

BUYER (Retail)
Person at headquarters level who buys fresh fruit and vegetables for a retail or wholesale organization.

C

CA (Controlled Atmosphere)
A method shippers use to store apples for several months, making the produce available year-round. The principal characteristic of controlled-atmosphere storage is a modification of the atmosphere in the storage room. Apples can be stored for prolonged periods in atmospheres consisting of 3 to 5 percent oxygen and .25 percent carbon dioxide, with the balance in nitrogen.

Because the method is based on modifying the atmosphere, the term "modified atmosphere" sometimes is used rather than "controlled atmosphere" or CA. CA is the most common term for this storage.

CAF (Cost and Freight)
A shipping term that indicates the seller will pay only freight charges to a location (not insurance).

CARLOT or CARLOT EQUIVALENT
A commonly used measure of shipping volume. One carlot means one railcar or truckload of fresh produce, or the equivalent thereof.

CARTAGE FIRM
A company that specializes in delivering produce from a terminal market company to the firm's customers.

CELLO or CELLO-WRAPPED
Fruits and vegetables packaged in cellophane bags are said to be cello-wrapped. Such packaging can be done either at the shipping level or in the back room of a retail outlet.

CENTRALIZED PACKAGING
Produce items are packaged in a centralized location, such as a retail warehouse, to achieve economies of scale (as opposed to packaging in the back room of a retail supermarket).

CHAIN or CHAIN STORE
A large number of supermarkets owned by a single company, using a single name or trademark.

COLE CROPS
Any of various species of the Brassica plant. Includes cabbage, kohlrabi, kale, and cauliflower.

COMMISSION MERCHANT
Any person operating in a receiving market who receives produce in commerce for sale, for or on behalf of another.

COMMON CARRIER
Truck or trucking company that is licensed and regulated by the Interstate Commerce Commission (as opposed to exempt haulers, who are not regulated by the ICC).

CONDITION

The USDA's Agricultural Marketing Service says "condition shall be deemed to include state of maturity, decay, freezing, injury, shriveling, flabbiness or any other deterioration that may have occurred or progressed since the product was harvested and which may continue to progress."

The following terms are used in USDA Market News Service reports in connection with "condition":

Good Condition does not justify any price reduction because of condition factors.

Fair Has a slight degree of off-condition factors that may warrant a small price reduction.

Ordinary Has a heavier degree of off-condition factors that may warrant a substantial price reduction.

Poor So badly off condition as to warrant a heavy price reduction.

Holdovers Presumably refers to merchandise that has been on the market longer than normal but remains near its original condition. Prices are discounted to clear up supplies, or because the probable shelf-life is reduced. The term is not specific and is used rarely.

CONTAINER

Any type of box, tray, or carton in which fruits and vegetables can be packed or shipped.

CONTROLLED ATMOSPHERE

See **CA**

COOPERATIVE

A wholesale warehouse operation that is owned by individual stores supplied by the warehouse. Each store has stock in the company and receives dividends at the end of each year.

CO-OP STORE

A retail food store owned by a consumer cooperative and operated by professional managers.

COST-PLUS
A system of wholesale selling where merchandise is billed to the retailer at cost plus a percentage markup, or dollar charge, for services rendered, calculated at the end of the order at a fixed rate or billed by product groups in varying amounts.

COUNT
Number of items in a container, corresponding to the size of the produce. For example, in lettuce, "24s" means 24 heads in a carton. The smaller the number, the larger the size. For instance, 24-size heads are larger than 30s. Most items are sized on the basis of the number of individual items in a container.

CWT
Hundredweight or 100-lb. units. Used as basis for freight rates.

D

DEAD HEAD
When a truck has to run empty. Sometimes an over-the-road trucker will haul produce one way but is unable to get a return load, so he "dead heads."

DEAL
A period of time in which growers and shippers in a certain area market their crops. For example, when Salinas, California, firms begin shipping vegetables, the "Salinas deal" has started.

DEALER
PACA term meaning any person engaged in the business of buying or selling produce in wholesale or jobbing quantities in commerce. This includes:

- Jobbers, distributors, and other wholesalers.
- Retailers, when the invoice cost of all purchases of produce exceeds $200,000 during a calendar year. In computing dollar volume, all purchases of fresh and frozen fruits and vegetables are counted, without regard to quality involved in a transaction or whether the transaction was in intrastate, interstate, or foreign commerce.

- Growers who market produce grown by others. The term "dealer" does not include persons buying produce for canning and/or processing within the state where it was grown.

DELIVERED SALE (Shipping-point Basis)
According to **PACA**, this means produce is to be delivered by the seller on board the car, or by truck, at the market where the buyer is located or at such other market as is agreed upon, free of any charges for any transportation or protective service. The seller assumes all risks for loss or damage in transit not caused by the buyer.

DEMAND
Market News Service defines "demand" as representing the immediate or current desire for a commodity, coupled with the ability and willingness of the buyer to pay for it. Demand at any given time should be considered in relation to what might be considered normal for the season.

The following demand terms are used by the USDA Market News Service:

Demand Exceeds Supply or Offerings When demand is substantially greater than the available supply of offerings.

Very Good Demand is well above average for seasonally normal offerings.

Good Demand is better than average and trading is more active than normal.

Moderate to Fairly Good Average buyer interest and trading.

Fairly Light Buyer interest and trading are slightly below average.

Light Demand is below average.

Very Light Few buyers are interested in trading.

Practically No Demand A stagnant condition on the market with very little interest and very few or no sales.

DIRECT STORE DELIVERY (DSD)
Direct delivery of merchandise from the manufacturer to the store. Also called "store-door delivery."

DISTRIBUTOR
Firm at the receiving end of the marketing system, usually a wholesaler, that supplies produce to retail and/or food-service outlets and to jobbers.

E

EXEMPT HAULER or TRUCKER
Since fresh fruits and vegetables are exempt from regulations of the Interstate Commerce Commission, they are hauled primarily by exempt truckers, who have the freedom to haul produce anywhere in the nation.

F

FLAT
A rectangular container, usually corrugated, with handles, that holds several units of product. For example, a flat generally holds 12 pints of strawberries. Berries and tomatoes are the most common items shipped in flats, with tomatoes often shipped in 2-layer flats.

FIELD BUYER See **Buyer (On-the-ground)**

FIELD WRAPPING
Packaging or wrapping vegetables in the field at harvest.

FILL-INS
An order, in addition to the regular order, from a retailer to a wholesaler or from a chain-store unit to the warehouse, covering items omitted in the original bulk order or items ordered but not delivered, perhaps being temporarily out of stock.

F.O.B. (Free on Board)
The produce quoted or sold is to be placed free on board the railcar, truck, or other agency at shipping point in suitable shipping condition. The buyer assumes all risk of damage and delay in transit that is not caused by the seller, regardless of how the shipment is billed.

The buyer shall have the right of inspection at destination before goods are paid for, to determine if the produce shipped complies with the terms of the contract or order at the time of shipments, subject to the provisions covering suitable shipping conditions (**PACA** definition).

FREIGHT RATE
The amount charged to ship merchandise. Rates are based on cost per 100 lbs. or on hundredweight (**CWT**).

GASSING
Some shippers of tomatoes use ethylene gas to ripen products picked in a green stage. Also, many wholesalers and retailers have gassing rooms to ripen bananas and tomatoes.

GONDOLA
Island-type display, open on two sides.

GRADE
Measure of quality as defined by the USDA and state departments of agriculture. USDA inspectors help verify the grades of various products. Terminology regarding grades is not consistent. For example, the top grade in potatoes is U.S. No. 1, but the top grade in apples is U.S. Extra Fancy, followed by U.S. Fancy. U.S. No. 1 is only the third-best apple.

GROSS MARGIN
Difference between the warehouse cost and the ultimate retail price of an item, expressed as a percentage of the retail price. For example, if the cost of a certain item shipped to the retail warehouse is 50 cents, and the same item is sold in the retail store for $1, the markup is 50 cents, or 100 percent. However, the gross margin is 50 cents, or 50 percent.

Most firms in the retail food business use gross margin, as opposed to markup, because it better expresses the true state of the retailers' cash. Most retailers believe that since everything is expressed in terms of cash-register receipts at retail, profits also should be expressed in terms of retail.

GROSS PROFIT
The spread, calculated in cash or percentage points, between cost and selling price of an item. Called "margin" if computed on the basis of the selling price and "markup" if computed on the basis of cost. In the retail-food industry, "gross profit margin" (profit on selling price) is used almost exclusively.

GROWER'S AGENT
Any person operating at a shipping point who sells or distributes produce in commerce for or on behalf of growers or others. This operation may include planting, harvesting, grading, and packing, as well as furnishing containers, supplies, or other services.

H

HOUSE
A firm's facility on a terminal market.

HUNDREDWEIGHT
100 lbs. Used as a basis for freight rates. See **CWT**

HYDROCOOLING
Process of conveying produce through cold water to remove field heat quickly. Used on items that are not harmed by water, such as broccoli, carrots, cauliflower, and celery.

I

INDEPENDENT STORE
Store or supermarket owned by an individual and not associated with a chain-store organization.

INSPECTION
Most produce shipments are inspected by either federal, state, or private inspectors to determine the quality and condition of the product. Shipments can be inspected at the shipping or receiving levels.

IN-STORE PACKAGING
Produce is packed in the back room of a supermarket.

INTERMODAL
System in which more than one mode of transportation is used to ship a product from shipper to receiver. The use of truck trailers or rail flatcars (**TOFC**) is the most common combination in the produce industry.

J

JOBBER
Normally a distributor who buys produce in small lots from a local wholesaler or distributor and resells to food services or retail firms.

JUMBO
Usually the largest size of a commodity; but, as in the case of dry onions, exceeded by "colossal."

L

LABEL See **Brand**

L.C.L. (Less-than-Carload Lots)
The term defines a price quoted by a shipper for wholesale lots of merchandise in less-than-carload lots.

L.T.L.
Abbreviation for less-than-truckload shipments.

LUG
Sturdy container, either wood or corrugated cardboard, for such soft-product items as grapes, tomatoes, and cherries.

LUMPERS
Workers on terminal markets or retail warehouse docks who unload trucks of produce. Lumpers, also called "swampers," are not employed by the terminal market or retail organization but work independently or belong to a union, such as the Teamsters. They are hired by truckers to unload products.

MARGIN
The cash or percentage of gross profit figures on the selling price; the reqūired accounting figure for a profit-and-loss statement. See **Gross Margin** and **Gross Profit**.

MARKET
In buying and selling, the term (as used by the USDA Market News Service) describes the price level at which a commodity is traded.

MARKET (FACILITY)
Where several receiving firms are located in close proximity, such as a terminal market or a state farmers' market.

MARKETING ORDER or AGREEMENT
Programs through which fruit and vegetable growers can work together to solve marketing problems that they cannot solve individually. This often includes a research, advertising, and promotion program.

Early efforts by producers collectively to improve the quality of their product and balance shipments with market demands often failed, because they could not get the entire industry to cooperate. In the 1930s, however, producers asked the federal government to give them the means to overcome this weakness, and the present Agricultural Marketing Agreement Act became law.

Under such programs, fruit or vegetable growers and shippers can withhold from the market poor-quality produce, which depresses price levels for all produce marketed. Marketing orders can specify quality in certain packs or standardized containers. They can also restrict shipment quantities at certain times in the marketing year.

MARKUP
Difference between the warehouse cost and the ultimate retail price of an item, expressed as a percentage of warehouse cost. For example, if the cost of a certain item shipped to the retail warehouse is 50 cents, and the same item is sold in the retail store for $1, the markup is 100 percent. See **Gross Profit**.

MATURE
Fully developed produce item but not necessarily ripened, as in mature green tomatoes.

MIDDLEMAN
An individual or firm who buys produce with the expectation of reselling it for a profit. Usually refers to a wholesaler, distributor, or terminal-market operator.

MIXED LOAD
Practice of loading two or more commodities or two or more types of packages in one truck or railcar. Often commodities are priced the same, whether in straight or mixed loads. At certain times or in some shipping districts a premium price is charged for produce in mixed loads or mixed packs.

N

NET PROFIT
Difference between gross profit and the cost of doing business. Usually reported two ways by a corporation: before taxes and after taxes.

NET SALES
Gross sales minus adjustments and returns—the final sales figure.

NETTING
A form of package, usually plastic, that looks like a net. While confining the product, it still allows maximum visibility and ventilation. Netting is used mostly for bags and for wrapping pallet loads.

O

OFFERING
The volume of product voluntarily made available for sale. The words light, moderate, and heavy are used to describe the offering, often with the qualifiers very or fairly.

ON-THE-GROUND BUYER See **Buyer (On-the-ground)**

P

PACA
Perishable Agricultural Commodities Act. Federal law enacted in 1930 that requires fair trading in the fruit and vegetable industry. **PACA** is sponsored and financed by industry and administered by the USDA's Agricultural Marketing Service. Almost everyone who deals in fresh or frozen fruits or vegetables in interstate commerce must have a **PACA** license.

PACA TRUST
The **PACA** Trust became effective December 20, 1984. All firms that operate under **PACA** requirements must maintain the trust. Trust regulations create a nonsegregated "floating trust" on perishable agricultural commodities "received" by a dealer or commission merchant and any receivable or proceeds from the sale of the commodities. "Received" means the time when ownership or control of possession is gained (i.e., on an **F.O.B.** sale, title passes to the buyer when the goods are tendered at shipping point, and the trust coverage begins at that time). To

"preserve the trust," written notice must be delivered to the debtor and received in a **PACA** office within 30 days after the "past due date."

PACKINGHOUSE/PACKING SHED
Facility used by a grower, packer, or shipper to place product into packages or containers.

PACKOUT
Total amount of a particular crop that is packed.

PALLET
A horizontal platform device used as a base for assembling, storing, and handling materials in a unit load. Recent industry efforts have been aimed at standardizing produce shipments on pallets 100 x 120 cm. Most pallets used in the industry are made of wood, although some are plastic.

PALLETIZATION
System of shipping fruits and vegetables on pallets.

PEAK
As in peak volume, the time in which the biggest volume of a certain item is being shipped.

PERISHABLES
Foods that deteriorate from exposure to air and temperature changes; foods requiring refrigeration or special handling in transit and at point of sale. All fresh fruits and vegetables are perishables.

PIGGYBACK (or Pig)
Moving a truck trailer on a rail flatcar. An innovative method of combining the low cost of rail line haul with the flexibility and speed of highway transport, pickup, and delivery.

PIPELINE
The stock necessary in all inventory locations throughout the market channel to keep one product on the shelf and available for consumer purchase. It includes surplus stock at the store level, inventory at the store warehouse level, inventory at the factory and manufacturer warehouse level, as well as finished goods in transit between any of these points.

PLACE PACK
Hand "arrangement" of fruit in a package for better display purposes. Place packing is also done at packing sheds to ensure better shipping.

PLAN III
Term used by railroads to describe a **piggyback** system in which the railroads furnish the flatcar and the shippers or co-ops furnish the trailers. Railroads perform ramp-to-ramp service, and shippers perform terminal service. This is the most common system used in the produce industry.

PLASTIC MESH
Packaging material used in produce bags or as netting.

POLYBAG
Polyethylene bag used to package produce items.

PORTION PACK
The packaging of individual-size portions.

PRECUT
A fresh product that is processed at either the shipper or retail levels. The pre-cut product usually is packaged in individual or small-quantity servings, providing a convenient option for end users.

PREPACK or PREPACKAGING
Practice of packaging, labeling, and price-marketing produce in advance rather than at the time of sale. This can be done before the product reaches the supermarket or in the back room of the store.

PRESSURE BRUISE
Common occurrence in bulk storages (e.g., apples and potatoes), usually when product is harvested under adverse weather conditions.

Q

QUALITY
Term used to describe the appearance and worth of a product item. According to the USDA's Agricultural Marketing Service, quality includes size, color, shape, texture, cleanliness, freedom from defects, and other more permanent physical properties of a product that affect its market value.

The following terms, when used in USDA Market News Service reports in connection with "quality," shall be interpreted as follows:

Fine Better than good. Superior in appearance, color, and other quality factors.

Good In general, stock that is highly merchandisable with a small percentage of defects. This term includes U.S. No. 1 stock generally; 85 percent U.S. No. 1 or better quality on some commodities, such as lettuce.

Fair Having a higher percentage of defects than "good." From a quality standpoint, roughly 75 percent U.S. No. 1 quality with some leeway in either direction.

Ordinary Having a higher percentage of defects than "fair." Roughly 50 to 65 percent U.S. No. 1 quality.

Poor Having a heavy percentage of defects, with a low degree of sale potential except to the "low-priced" trade. More than 50 percent grade defects.

R

RECEIVER
Anyone (retail chain; co-op; voluntary, wholesaler, or terminal market operator) who receives shipments of produce from growing areas.

REPACK
Loose items assembled to make a full case.

RETAIL
The term "retail" often is used to denote the retail price of a product. For example, the "retail" on lettuce may be 69 cents.

ROLLER
A carload or truckload of produce that has been shipped but not yet sold. This usually occurs at a time when **F.O.B.** prices are low, and the shipper hopes the market price will improve by the time the product reaches a destined market.

S

SALES AGENT
Person who usually handles marketing of a product for a grower, or group of growers.

SERVICE WHOLESALER
A wholesale organization that supplies complete purchasing and merchandising services for a group of independent stores or for small chains.

SHIPPING POINT
Point at which shipment of produce is begun.

SHIPPER
Any person operating at the shipping point who is engaged in the business of buying produce from growers or others, and whose operations may include distributing such produce in commerce by resale or other methods, or who handles such produce on joint account with others (**PACA** definition).

SHORTS
When retail chains or other firms that usually buy direct from shippers end up short of product, they will fill the gap by buying from terminal-market operators or other wholesalers or distributors. When they do this, they are buying "shorts."

SHRINKAGE
Loss of product in the marketing chain. It may include such factors as concealed damage during shipment, loss in handling and displaying product and trimming, and theft and damage by customers at retail.

In the summer, soft fruits are highly perishable and therefore highly susceptible to shrinkage. Lettuce and tomatoes also are high-shrink items.

SHRINK WRAP
A clear plastic film, conforming to the object or product it covers when heat is applied.

SIZING
At the shipping-point level, produce items are separated according to size, either by machine or by hand.

SLIP SHEET
A form of pallet. Instead of being a platform device, it is a thin piece of material made of either fiberboard or plastic that requires a specially equipped forklift to move unitized loads. It is growing in popularity in the produce industry because it is lightweight and easily disposable.

SOURCE WRAPPING/SOURCE PACKAGING
Wrapping or packaging product at the shipping point, either in the field or packing house. Items most commonly packaged at the source level are lettuce, celery, carrots, apples, potatoes, and radishes.

SPECIALTY WHOLESALE GROCER
A wholesaler who distributes a limited number of lines and varieties for which he acts as sales and service representative.

SPROUTING (Potatoes)
Growth nodules growing out of the eyes (indentations) of potatoes. They usually appear after several months of storage and when storage temperatures rise. Sprout inhibitors control early sprouting.

STATE FARMERS' MARKET
State-owned markets where the state's farmers can come to sell product. States with the most state farmers' markets are Florida, Georgia, North Carolina, South Carolina, and Alabama.

STORE-DOOR DELIVERY
Direct delivery from shipper to retail store, bypassing the wholesale or retail warehouse. Watermelons probably are the most likely item to be delivered this way.

STRAIGHT LOAD
Shipment consisting of just one product.

STREET BUYER
Usually refers to a small operator on a terminal market.

SWAMPERS See **Lumpers**

T

TABLESTOCK
Refers to potatoes that are sold in the fresh market as opposed to being processed.

TERMINAL MARKET
Central location where several wholesalers, distributors, and/or jobbers are grouped. The market can be owned by the state, the city, or private companies.

TERMINAL PACKAGING
Packaging done by a firm on a terminal market.

TOFC (Trailer-on-flatcar)
Intermodal method of hauling a flat trailer load of fresh produce on a flat railroad car. See **Piggyback**.

TRAY
A small container for fruits and vegetables. Made of pulp or plastic, such containers usually are for consumer packs, but larger trays are used for shipping.

TREE RUN
Term referring to ungraded fruit, straight from the trees.

TRUCK LOT
Truckload of product.

TUBE TOMATOES
Container with polyethylene window, holding three or four tomatoes.

U

UNITIZATION
Process of standardizing containers and pallets to achieve more efficient loads or to conform to a distributor's warehouse slot.

UNIVERSAL PRODUCT CODE (UPC)
A product-coding system designed to allow simpler and more accurate product identification as goods move from shipper to wholesaler to retailer, and to allow the use of scanner-equipped check stands, which speed customer check-out operations.

V

VACUUM COOLING
Method used by shippers to remove field heat from lettuce. An entire truckload is placed in the cooler, and within an hour the heat has been taken out.

VINE-RIPE
The USDA has discontinued this tomato term, which at one time meant "turning color to nearly red." Industry still uses the term, however, and it usually means "breakers to bright red." (Breaker usually refers to a tomato that is just beginning to turn from a solid green color.)

VOLUNTARY
A grocer wholesaler who sponsors a voluntary organization of independent chains or independent stores. Generally, the stores in such a group adopt a common name and engage in joint advertising.

W

WAREHOUSE STORE
Store aimed at a particular target audience. Warehouse and limited-item outlets cater to the price-conscious shopper who is willing to sacrifice service for lower prices. Products are displayed directly in their cartons with no frills; items are boxed and bagged by customers.

WASH
Many produce items are washed at the packing level before they are shipped.

WAXING
Technique used by shippers of apples, cucumbers, and a few other produce items to make their products shinier and more attractive. It also helps reduce shriveling related to water-loss. Apples are washed, dried with warm forced air, then dipped in or sprayed with a thin coat of wax. The fruit is polished by various mechanical polishers.

"WET" PRODUCE
Vegetables that will not be hurt by the application of moisture or ice in transit or display, such as: lettuce and celery.

Adapted with permission from *The Packer: 1989 Produce Availability & Merchandising Guide.*

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